

**AWARENESS OF THE PREVENTIVE MEASURES OF PROSTATE
CANCER AMONG SECONDARY SCHOOL TEACHERS IN MBAITOLI
L.GA, IMO STATE, NIGERIA**

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ABSTRACT

This study investigated the awareness of the preventive measures for prostate cancer among secondary school teachers in Mbaitoli L.GA, Imo State, Nigeria. The study adopted a cross-sectional survey design. The population comprised 500 secondary school teachers out of which 200 were randomly selected through a multi-stage sampling procedure. A structured questionnaire called the Awareness of Preventive Measures of Prostate Cancer Questionnaire (APMPCQ) was used as an instrument for data collection. Three juries are drawn from the Department of Health Education, Alvan Ikoku Federal College of Education, validated the instrument. The reliability co-efficient of 0.78 and 0.76 were obtained using the Cronbach Alpha Reliability coefficient on the primary and secondary preventive measures of prostate cancer awareness respectively. The data obtained were analyzed using descriptive statistics of frequency and percentage in answering the research questions and inferential statistics of chi-square were used to test the hypotheses at 0.05 level of significance and appropriate degree of freedom. The findings revealed that more than half (56%) of the respondents were aware of the primary preventive measures for prostate cancer. The findings also revealed that more than half (53.5%) of the respondents are aware of the secondary preventive measures for prostate cancer. Based on the findings, nearly, half of the respondents were unaware of the primary (44%) and secondary (46.6%) preventive measures for prostate cancer. The findings also revealed that the respondents in the age group 40 to 49 years and those whose primary sources of information are television were aware of the preventive measures of prostate cancer more than their counterparts in the other age groups and of other sources. The findings further revealed that

the awareness of preventive measures for prostate cancer does not vary by age and primary source of information. Based on the findings, the researchers recommended among others that; dissemination of information about prostate cancer and its preventive measures should be through multiple information sources using jingles, posters, radio, TV talks, and patient education by medical personnel in the general outpatient department.

Keywords: Awareness, prostate cancer, prevention, preventive measures.

1.0 INTRODUCTION

Prostate cancer (PC) is considered one of the most common non-skin cancers among men. It begins when a mass of cells grows out of control and begins invading other tissues. It is a degenerating disease, therefore it grows slowly. Prostate cancer had become an important health burden globally. Though the health burden is high globally, it is higher in sub-Saharan Africa, Latin America, and the Caribbean (Wong, et al., 2016). Global incidence and mortality of prostate cancer are on the increase yearly. Adeloje, et al., (2016) revealed that the media of prostate cancer incidence rate among men in Africa ranges from 19.5 to 39.0 per 100,000 population. In Nigeria, Baba and Hincal (2018) revealed that prostate cancer is the most common cancer in men with evidence of increased morbidity and mortality from the disease.

The literature revealed a decline of prostate cancer in developed countries, but the reverse seems to be the case in sub-Saharan Africa where reports from studies (Dawan, et al., 2000; Parkin, et al., 2010) showed that the majority of patients with the disease are present with advanced incurable tumors, with less than five surviving up to five years after diagnosis compared to 98 percent survival 5 years post-diagnosis among African- Americans in the United States of America. The late presentation of patients with prostate cancer and the poor survival rates recorded in sub-Saharan Africa is not surprising because of poor awareness of the disease's preventive measures across the continent as reported by Nakandi, et al (2013). It is therefore evident, that the awareness of the diseases, particularly, their risk factors and preventive measures by all, irrespective of age and gender, especially by those at risk (40 years and above) is crucial in curtailing the prevalent rate of late presentation of cases, as well as the high mortality rate from the disease across the country, including Imo State.

Awareness is the state of ability to perceive, feel, or be conscious of events, objects, or sensory patterns. In general, it could be termed as being knowledgeable, conscious, cognizant, or informed. In this study, awareness shall be seen as being informed about the preventive measures for prostate cancer. There is a saying that to be informed is to be armed. When an individual is informed with appropriate and adequate information about a particular disease, the chances of that individual contracting the disease will be reduced or in some cases prevented. Therefore, the awareness of the preventive measures of prostate cancer among adults (both males and females) aged 40 years and above will help in reducing the incidence and mortality rate of the disease among the males in this age group. The awareness can be created through regular campaigns by medical personnel and through mass and social media.

Prevention of disease is significantly promoted by being aware of the preventive measures of the disease. However, awareness of the risk factors of prostate cancer will also play a significant role in its prevention. A risk factor is anything that increases an individual's risk or chances of getting a disease. Risk factors of prostate cancer according to the American Cancer

Society (2020) include age; race/ethnicity; family history (these factors are not modifiable, that are controlled); geography; gene mutation; obesity; and diet (these risk factors expose even young male adults to prostate cancer).

Prostate cancer is rare in men younger than 40 years but the chances of having prostate cancer increase rapidly after age 50. American Cancer Society revealed that about 6 in 10 cases of cancers are seen in men older than 65 years, hence, age is one of the major risk factors for prostate cancer. On family history as a risk factor for prostate cancer, Cheng and Nelson (2019) revealed that having a father or brother with prostate cancer more than doubles a man's risk of developing the disease and that it is higher for men who have a brother with the disease than those who have a father with it.

However, the awareness of the risk factors must be accompanied by actions. The required actions are the preventive measures for the disease. Preventive measures are ways of forestalling the occurrence of something through planning and taking action before the problem occurs. There are no sure ways to prevent prostate cancer but the following according to Baba and Hincal (2019) can reduce the risk of having the disease: controlled healthy weight, physical activity, and diet. It is advised that staying at a healthy weight, keeping physically active, following a healthy eating pattern (eating a variety of colorful fruits and vegetables and whole grain) limiting red and processed meats, sugar-sweetened beverages, and highly processed foods, limiting calcium supplement intake, as well as eating food rich in vitamins, minerals and other supplements lower prostate cancer risk.

Prostate cancer can be prevented by eating fewer calories, exercising more, reducing stress to improve health and survivorship, and avoiding smoking and other unhealthy lifestyles. Prostate cancer screening is another preventive measure for prostate cancer. The reason is that it serves as an effective tool for early detection. Early detection helps in the management and reduction of the rise of prostate cancer mortality rate. World Cancer Research Fund (2012) indicated that men can reduce their risk of prostate cancer by being physically active, maintaining a healthy weight, and drinking less alcohol as these modifications might prevent 42 percent of prostate cancer worldwide. Ensuring availability and awareness of early detection services and taking immediate steps according to Burgess et al., (2009) are regarded as the main strategies for warranting improvement in prognostic outcomes.

However, prostate cancer is better prevented than cured. One of man's greatest enemies is ignorance but knowledge which tends to awareness according to Akalonu (2016) will give one the appropriate frame of mind to practice a healthy lifestyle and avoid diseases.

One-third of prostate cancer could be prevented if men, especially, the most at-risk group are armed with accurate and adequate information about its risk factors and preventive measures. Prevention of prostate cancer can be classified into four levels, primordial, primary, secondary, and tertiary levels. In this study, the researchers limited it to primary and secondary preventive levels measures. Primary prevention seeks to prevent the onset of a specific disease via risk reduction, by altering behaviors that can lead to the disease; or by enhancing resistance to the effects of the exposure to a disease agent. On the other hand, secondary prevention deals with latent diseases and attempts to prevent an asymptomatic disease from progressing to a symptomatic disease. The aim of primary prevention of prostate cancer according to Muhammad (2007) is to eliminate or modify established risk factors for developing the disease.

Therefore, primary preventive measures for prostate cancer are those measures that forestall the onset of prostate cancer during the pre-pathogenesis period. These measures are revealed by Salama (2011) as measures that target at a reduction in disease-causing propensities and virulence of agents of risk factors of the disease, and the altering of the susceptibility of persons at risk of the disease or health problem. Atulomah, et al (2010) stated that primary preventive measures for prostate cancer include screening at the asymptomatic stage of the development of the disease and lifestyle adjustments that include dietary regimen and supplements. Dietary adjustments and changes as advised by Cancer.Net (2020) should be made many years earlier and not when the person is close to 40 years. Eating tomatoes and other red foods such as watermelon which contains an oxidant called lycopene and green vegetable which contain compounds that help the body break down cancer-causing substances called carcinogens were recommended by Kim (2020). Soya beans, lentils, alfalfa sprouts, and chickpeas contain isoflavone which reduces the risk of prostate cancer. Therefore, they should be eaten regularly by men, to reduce their risk of developing prostate cancer.

Behavioral or lifestyle risk factors can be altered to reduce one's overall chance of getting prostate cancer. It is obvious that awareness about prostate cancer can impact directly behavior, leading to modification in prostate cancer risk behaviors. According to Elliassen, et al , (2010), the benefits of moderate exercise such as brisk walking, bicycling, and swimming among young and older men reduce the risk of prostate cancer. In the same vein, quitting smoking, and drinking four to five cups of coffee (but lower than 400 milligrams) daily according to Kim (2018) lowers the chances of fatal and high-grade prostate cancer. This is because coffee contains cafestol and kahweol which have well-known cancer-fighting abilities. Kim also advised that animal-based fat such as butter, candy, cheese, and prepackaged food should be replaced with plant-based fat such as olive oil, fruits, fresh vegetables, and nuts and that overcooked meat should be avoided because it produces carcinogens. It is important to know that folate found in green vegetables, beans, and whole grains lowers the risk of prostate cancer but supplementing with folic acid, which is a man-made folate, may increase the risk of prostate cancer.

Secondary preventive measures as discussed by Farazi, Siahpush, Maloney, Dinkel, Michalex, and John (2019) include diagnosis, treatment, management and screening. Screening leads to early detection and management and for a better outcome, screening should be done at the stage of development of the disease when there are no symptoms. The rationale for screening is to reduce the probability of developing the disease at the asymptomatic stage. Screening at this stage helps to prevent the disease from progressing to the symptomatic stage. This can be done using prostate cancer detection methods such as microscopic examination. The importance of early screening cannot be overemphasized as it improves outcomes, and reduces prostate cancer-related mortality. Atulomah et.al.,(2010) stated that prostate cancer screening involves physical examination to palpate the prostate by digital rectal examination (DRE), by measuring the levels of prostate-specific antigen (PSA) in blood, or by biopsy. Atulomah et. al. advised that screening should begin at the age of 30-40 years. This is because prostate cancer report between the age groups of 30 years to 40 years is on the increase. Treatment of prostate cancer and management is done using medication and surgical interventions.

Prostate cancer morbidity and mortality can be reduced through early detection because it not only increase the chances for successful treatment and cure but also improves the chances of

survival and lessens the need for invasive treatment (Noel, Heid, Tardivon, Dilhuydy, Haber & Seradour, 2014). Therefore, medical advances have shown that one-third of all cancers are preventable and a further one-third, if diagnosed sufficiently early, is potentially curable (Kayode, et al., 2015). Therefore, there is a need to assess the awareness of preventive measures of prostate cancer among secondary school teachers aged 40 years and above in Mbaitoli LGA, Imo state. This is because literature revealed that despite the high burden of the disease among men, little is known about the disease due to poor awareness of its preventive measures. Again, there is paucity of research on the disease and particularly, studies on teachers' awareness on the preventive measures of the disease has not been carried out in the LGA to the best knowledge of the researchers, this is the knowledge gap the study wants to fill in literature.

2.0 PURPOSE OF THE STUDY

The purpose of the study was to determine the preventive measures of prostate cancer among secondary school teachers 40 years and above in Mbaitoli LGA, Imo State. Specifically, the study seeks to:

1. Determine the awareness of the primary preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State.
2. Ascertain the awareness of the secondary preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State.
3. Ascertain the awareness of the preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State based on age.
4. Ascertain the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State based on their primary source of information.

2.1 Research Questions

1. What is the awareness of the primary preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State?
2. What is the awareness of the secondary preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State?
3. What is the awareness of the preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State base on age?
4. What is the awareness of the preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State based on their primary source of information?

2.2 Hypotheses

1. There is no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitolu LGA, Imo State based on age.
2. There is no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State based on their primary source of information.

3.0 METHODS

Cross-sectional descriptive survey design was adopted for the study. The population of the study was 500 teachers (Secondary Education Management Board, Owerri, 2021) out of which 200 secondary school teachers were selected through multi-stage sampling procedure. In the first stage, balloting without replacement was used to select 10 secondary school from the 22 secondary schools in Mbaitoli L.G.A. In stage two, purposive sampling was used to select 20 teachers from each of the sampled secondary schools. In stage three, simple random sampling was used to select 10 teachers from senior secondary schools and 10 teacher from the junior secondary schools of each of the sampled secondary schools.

The instrument for data collection was the researchers' self-structured questionnaire called Awareness of Preventive Measures of Prostate Cancer Questionnaire (APMPCQ). The questionnaire was divided into three sections. Section A contains items on demographic characteristics of respondents. Section B contains items on primary preventive measures of prostate cancer, while section C contains items on secondary preventive measures of prostate cancer. The instrument was validated by three (3) experts from the Department of Health Education, Alvan Ikoku Federal College of Education, Owerri. Combach Alpha Correlation Coefficient was used to establish the reliability and an index score of 0.76 and 0.74 were obtained.

Two hundred copies of the questionnaire were distributed and collected back. The distribution was done on face-to-face basis. All the instrument distributed were correctly and completely filled and therefore were used for the study. The data collected were presented in contingency tables and analyzed with descriptive statistics of frequency count and percentages to answer the research questions. Inferential statistics of chi-square (χ^2) was used to test the hypotheses at 0.05 level of significance with appropriate degrees of freedom.

4.0 RESULTS

Table 1: Demographic Data of respondents (n = 200)

S/n	Variable	F	Percentage
Age			
1.	40 -49years	92	46%
2.	50 -59 years	60	30%
3.	60years above	48	24%
	Total	200	101
Primary Source of Information			
1.	Television	68	34%
2.	Radio	32	16%
3.	Internet	36	18%
4.	Medical personnel	64	32%
	Total	200	101

Research Question One

What is the awareness of the primary preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State?

Table 2: Responses on Awareness of Primary Preventive Measures of Prostate Cancer among Secondary School Teachers in Mbaitoli L.G.A.

S/n	Primary Preventive Measures of Prostate Cancer	Aware F %	Unaware F %	Total
1.	Knowing your family history of prostate cancer	144(74%)	56(26%)	200
2.	Health education on prostate cancer	112(56%)	88(44%)	200
3.	Not carrying mobile phone in your pocket	88(44%)	112(56%)	200
4.	Regular exercise like cycling	72(36%)	128(64%)	200
5.	Eating tomatoes and water melon	144(74%)	56(26%)	200
6.	Drinking upto five cups of coffee daily	124(62%)	76(38%)	200
7.	Not eating overcooked meat	84(42%)	116(58%)	200
8.	Reducing calcium supplement	80(40%)	120(60%)	200
9.	Avoiding or quitting smoking	128(64%)	72(36%)	200
10.	Screening at asymptomatic stage	140(70%)	60(30%)	200
	Grand total	1116	884	200
	Mean	112	88	200
	Mean (%)	56%	44%	100

Table 2 above revealed the responses on awareness of primary preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State. From the above analysis, it has been deduced that more than half of the respondents 112(56%) are aware of the primary preventive measures for prostate cancer while 88(44%) are unaware. The item analysis showed that more than half of secondary school teachers in Mbaitoli L.G.A are aware of six of the items as primary preventive measures for prostate cancer. The items are: knowing your family history of prostate cancer 144(74%), eating tomatoes and watermelon 144(74%), screening at asymptomatic stage 140(70%), avoiding or quitting smoking 128(64%), drinking upto five cups of coffee daily 124(62%) and health education on prostate cancer 112(56%).

Research question two

What is the awareness of secondary preventive measures for prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State?

Table 3: Responses on Awareness of Secondary Preventive Measures of Prostate Cancer among Secondary School Teachers in Mbaitoli L.G.A.

S/n	Secondary Preventive Measures of Prostate Cancer	Aware F %	Unaware F %	Total
1.	Surgical intervention	144(72%)	56(28%)	200
2.	Radio therapy	76(38%)	124(62%)	200
3.	Early screening	122(56%)	88(44%)	200
4.	Management using medication	52(26%)	148(74%)	200
5.	Lifestyle modification during treatment	144(72%)	56(28%)	200
6.	Regular medical check up	96(48%)	104(52%)	200
7.	Early treatment	112(56%)	88(44%)	200
8.	Avoiding self-medication	84(42%)	116(58%)	200
9.	Completing the treatment course	114(72%)	56(28%)	200

Grand total	964	836	1800
Mean	107	93	200
Mean (%)	53.5%	46.5%	100%

Table 3 above revealed the responses on awareness of secondary preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State. From the above analysis, it has been deduced that more than half of the respondents 107(53.5%) are aware of the secondary preventive measures of prostate cancer while 93(46.5%) are unaware.

Again, the item analysis showed that more than half of secondary school teachers in Mbaitoli L.G.A, Imo State are aware of five of the items as secondary preventive measures of prostate cancer. The items include, surgical interventions 144(72%), lifestyle modification during treatment 144(72%), completing the treatment course 144(72%), early screening 112(56%) and early treatment 112 (56%).

Research question three

What is the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on age?

Table 4: Responses on Awareness of Preventive Measures of Prostate Cancer among Secondary School Teachers in Mbaitoli L.G.A., Imo State based on age

S/n	Preventive measures of prostate cancer	40 – 49years 92(46%)		50 – 59years 60(30%)		60years above 48(24%)		Total
		Aware F %	Unaware F %	Aware F %	Unaware F %	Aware F %	Unaware F %	
1.	Primary preventive measures of prostate cancer	50(25)	42(21)	34(17)	26(13)	27(13.5)	21(10.5)	200
2	Secondary preventive measures of prostate cancer	49(24.5)	43(21.5)	33(16.5)	27(13.5)	25(12.5)	23(11.5)	200
Grand total		99	85	67	53	52	44	400
Mean		49	43	33	27	26	22	299
Mean (%)		24.5%	21.5%	16.5%	13.5%	13%	11%	100%

Table 4 above showed responses on awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on age. From the table, it has been deduced that out of 92(46%) of the respondents within the age bracket of 40 – 49years, 49(24.5%) are aware of the preventive measures of prostate cancer while 43(21.5%) are unaware of the issue. Again, out of 60(30%) of the respondents within the age bracket of 50 -59 years, 33(16.3%) are aware of preventive measures of prostate cancer while 27(13.5%) are unaware of the issue. Furthermore, out of 48(24%) of the respondents within the age bracket

of 60 years and above, 26(13%) are aware of the preventive measures for prostate cancer while 22(11%) are unaware of the issue.

Research question four

What is the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on primary source of information?

Table 5: Responses on Awareness of Preventive Measures of Prostate Cancer among Secondary School Teachers in Mbaitoli L.G.A., Imo State based on age.

S/n	Preventive measures of prostate cancer	Television 68(34%)		Radio 32(16%)		Internet 36(18%)		Medical personal 64(32%)		Total
		Aware F %	Unaware F %	Aware F %	Unaware F %	Aware F %	Unaware F %	Aware F %	Unaware F %	
1.	Primary preventive measures of prostate cancer	38(19)	30(15)	19(9.5)	13(6.5)	18(9)	18(9)	34(17)	30(16)	200
2	Secondary preventive measures of prostate cancer	37(18.5)	31(15.5)	13(6.5)	20(10)	20(10)	16(8)	36(18)	28(14)	200
Grand total		75	61	38	26	38	34	70	58	400
Mean		38	30	19	13	19	17	35	29	200
Mean (%)		19%	15%	9.5%	6.5%	9.5%	8.5%	17.5%	14.5%	

Table 5 above showed responses on awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on primary source of information. From the table, it has been deduced that out of 68(34%) of the respondents whose primary source of information is the television, 38(19%) are aware of the preventive measures of prostate cancer while 30(15%) are unaware of the issue. Again, out of 32(16%) of the respondents whose primary source of prostate cancer while 13(6.5%) are unaware of the issue. Furthermore, out of 36(18%) of the respondents whose primary source of information is the internet, 19(9.5%) are aware of preventive measures of prostate cancer while 17(8.5%) are unaware of the issue. Finally, out of 64(32%) of the respondents whose primary source of information is medical personnel, 35(17.5%) are aware of preventive measures of prostate cancer while 29(14.5%) are unaware of the issue.

Hypothesis One

There is no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on age.

Table 6: Chi-square Analysis on Awareness of Preventive Measures of Prostate Cancer among Secondary School Teachers in Mbaitoli L.G.A, Imo State based on age

Age	N	Aware O	Unaware E	χ^2 cal value	χ^2 tab value	Df	P- value	Decision
40 -49	92	49(49.68)	43(42.32)					
50 – 59	60	33(40)	27(27.60)	0.05	5.99	2	0.05	Accepted

60yrs & above 48 26(25.92) 22(22.080)

Table 6 showed that the chi-square χ^2 calculated value of 0.035 is less than χ^2 table values of 7.82 at 2 degrees of freedom and 0.05 level of significance. This, therefore, gave the researchers the basis to accept the null hypothesis which stated that, there is no significant difference in the awareness of preventive measures for prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on age. This implies that age has no influence on the awareness of preventive measures for prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State.

Hypothesis Two

There is no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on the primary source of information.

Table 6: Chi-square Analysis on Awareness of Preventive Measures of Prostate Cancer among Secondary School Teachers in Mbaitoli L.G.A, Imo State based on the primary source of information

Primary of source of information	N	Aware O	Unaware E	χ^2 cal value	χ^2 tab value	Df	P-value	Decision
Television	68	38(37.74)	30(30.26)	0.035	7.82	3	0.05	Accepted
Radio	32	19(17.76)	13(14.24)					
Internet	36	19(19.98)	17(16.02)					
Medical personnel	64	35(35.52)	29(28.48)					

Table 7 showed that the chi-square χ^2 calculated value of 0.35 is less than χ^2 table value of 7.82 at 2 degrees of freedom and 0.05 level of significance. This therefore, gave the researchers the basis to accept the null hypothesis which stated that, there is no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State based on primary source of information. This implies that primary source of information has no influence on the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State.

5.0 DISCUSSION OF FINDINGS

Findings from table 1 revealed that 46% of participants were in the age group 40 to 49 years, 30% were in age group 50 to 59years, while 24% were aged 60 years and above (60 to 65 years). Data showed that television is the primary source of information about preventive measures of cancer of 35% of the participants, 32% medical personnel, internet 18% and radio 16%. Conclusively, media is the primary source of information of 68% of the participants while only 32% indicated medical personnel as that primary source of information.

Research question one sought to determine the awareness of the primary preventive measures of prostate cancer among secondary school teachers in Mbaitoli L.G.A, Imo State, Nigeria. The

findings revealed that slightly more than half (56%) of the secondary school teachers in Mbaitoli L.G.A, Imo State are aware of the primary preventive measures of prostate cancer while 44% were not aware of the same issue. Therefore, their level of awareness could be said to be average. The findings are not expected and therefore surprising because one expects that based on the level of education of teachers, they should be aware of prostate cancer preventive measures. The finding is in consonant with the findings of Neku et al., (2019) that 58.3% of their respondents were aware of prostate cancer preventive while 41.7% were less aware. The findings disagreed with the findings of Abdulrhman et al., (2018) that less than 30% of adult males are aware of preventive measures of prostate cancer. The findings also revealed that majority (74%) of the respondents are aware that knowledge of one's family history of prostate cancer and eating tomatoes and water melon are primary preventive measures of prostate cancer. The finding is in line with the findings of Kim (2020) that adults are aware that eating tomatoes and other red foods which contain lycopene prevents prostate cancer.

Research question two sought to determine the awareness of secondary preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State Nigeria. The findings revealed that more than half (53.5%) of the respondents are aware of the secondary preventive measures of prostate cancer while nearly half (46.5%) are not aware of the same issue. Therefore, the respondent's awareness of secondary preventive measures of prostate cancer is average. The findings were not expected and therefore surprising because it was below the researcher's expectation. Neku, et. al. (2019) findings of their respondents awareness being below the researcher's expectation agrees with the findings.

The findings on the awareness of early screening (56%) as a secondary preventive measure of prostate of cancer agreed with the findings of Kehinde, et al., (2018) that 59.3% of male staff in the University of Lagos were aware of prostate specific antigen (PSA) test as a secondary preventive measure of prostate cancer. The findings disagreed with the findings of Atulomah, et. al. (2010) that the level of awareness about prostate cancer among men of their study was low because only 6.3% of their respondents were aware of prostate cancer including its preventive measures. The disparity could be attributed to class of respondents used in the two different studies and the area of the study.

Research question three sought to determine the awareness of preventive measures of prostate cancer and among secondary school teachers in Mbatioli LGA, Imo State, Nigeria based on age. The findings revealed that secondary school teachers of age group 40 -49years were more aware (24.5%) of preventive measures of prostate cancer than their counterparts in age groups 50 -59years (16.5%) and 60 years and above (13%). The findings were expected and not surprising. This is because according to American Cancer Society (2020), having prostate cancer increase rapidly after 50years of age. Therefore, those below this age will likely source for information on its prevention than those from ages 50 years and above. The findings contradict the findings of Abdulrhman, et. al. (2018) that men aged 50 to 59years were more aware of prostate cancer, including its preventive measures when compared with men in other age groups of their study.

Research question four sought to determine the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli LGA, Imo State, Nigeria based on source of information. The findings showed that the respondents whose primary source of information

was television were more aware (19%) of the preventive measures of prostate cancer than their counterparts whose primary source of information were medical personnel (17%), radio (9.5%), and the internet (9.5%). The findings also revealed that the media is the primary source of information of 68% of the respondents while medical personnel is the primary source of information about prostate cancer of 32% of the respondents. This finding is consonant with the findings of Abdulrhman, et. Al., (2018) that source of information for 36.6% of the participants in their study is the medical team members while the remaining 63.4% indicated their sources to be either the media or friends. The finding is in variance with the findings of Atulomah, et al, (2010) that only 5.3% of the respondents in their study indicated medical doctors or physicians as their primary source of information about prostate cancer. The findings are also consistent with the findings of Oladimeji, et al., (2010) that media is the major source of information about prostate cancer (its preventive measures inclusive).

The findings on hypothesis one showed that there is no significant difference in the awareness of prostate cancer among secondary school teachers of various age group in Mbaitoli LGA, Imo State, Nigeria. This finding was expected and not surprising because all the respondents were middle aged adults who by virtue of their ages are more concerned about health promotion than younger adults and older adults. The finding is at variance with the findings of Abdulrhman, et al, (2018) that age has a significant effect on awareness of prostate cancer. The variance may be attributed to the fact that they used both middle aged adults and older adults (40 to 89years) in their study while this study was delimited to adults aged 40 to 65 years.

Findings on hypothesis two revealed that there is no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers in Mbaitoli, LGA, and Imo State, Nigeria based on their primary source of information. Although the findings revealed that media is the primary source of information for majority of the respondents than those whose primary source of information is the medical personnel.

6.0 CONCLUSIONS

Based on the findings, the following conclusions were made:

1. Overall, more than half (56%) of secondary school teachers were aware of the primary preventive measures of prostate cancer.
2. Overall, more than half (53.5%) of secondary school teachers, are aware of the secondary preventive measures of prostate cancer.
3. Secondary school teacher in age group 40 to 49years are aware of preventive measures of prostate cancer more than their counterparts in age group 50 to 59 years and 60 to 65 years.
4. Overall, secondary school teachers whose primary source of information is television were aware of preventive measures of prostate cancer more than their counterparts whose primary source of information were medical personnel, radio and the internet.
5. There was no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers of various age groups.
6. There was no significant difference in the awareness of preventive measures of prostate cancer among secondary school teachers based on their primary source of information.

7.0 RECOMMENDATION

Based on the findings of the study and the conclusions drawn, the following recommendations were made:

1. Community based prostate cancer education intervention targeting the preventive measures of prostate cancer should be organized and implemented by the Ministry of Health to increase the awareness of prostate cancer among men and women.
2. There should be regular sensitization programmer on preventive measures of prostate cancer targeting persons aged 50 years and above especially the male folks by public health education.
3. Medical personnel should create more avenue other them hospitals to educate the public on prostate cancer especially its preventive measures to reduce the number of those who source for information from other sources which may not be appropriate and accurate.
4. Prostate cancer screening should be incorporated into National Health Insurance Scheme (NHIS) and be made free for all males since on early detection through since early detection through screening is one of the secondary preventive measures of the disease.

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