



## PRACTICE OF CANCER PREVENTION STRATEGIES AMONG STAFF OF FEDERAL UNIVERSITIES IN NORTH CENTRAL ZONE, NIGERIA

Akorede Seun Nurudeen 

Department of Human Kinetics and Health Education, Ahmadu Bello University Zaria, Nigeria

### Article Information

#### Article History:

Accepted July 2019

Approved August 2019

Published September 2019

#### Keywords:

Cancer prevention,  
practice, staff of federal  
universities

### Abstract

**Background:** The high rate of death as a result of cancer in the world is worrisome, the trend as revealed in many literatures including World Health Organization, shows that cancer accounts for 12.5% of all deaths in the world. This study was conducted to assess practice of cancer prevention strategies among staff of Federal universities in North Central Zone, Nigeria.

**Methods:** To achieve this purpose, ex-post facto research design was used. A total of 756 staff from seven federal universities in north central zone Nigeria with a population of twenty-five thousand three hundred and sixty-one 25,361 were selected through multi-stage sampling procedures of simple random, stratified, proportionate and accidental. The instrument used for the study was pilot tested with the use of Cronbach Alpha 0.859 was obtained respectively. Out of the 756 copies of questionnaire distributed, 752 were valid for analyses. Inferential statistics of one sample t-test, was used to test the data collected.

**Results:** The results revealed that the staff of federal universities in north central zone Nigeria are poor in practice of cancer prevention strategies with P-value of 0.11 at 0.05 level of significance.

**Conclusions:** Based on the results, the following conclusion was drawn; Cancer prevention strategies practice is poor among staff in Federal Universities of North-central Zone, Nigeria. Based on the conclusion, it was recommended that concerned Government and non-Governmental agencies and Ministry of Health should double efforts in ensuring that Federal University staff are provided adequate intervention programmes and Health Education on improved practice of cancer prevention strategies.

## BACKGROUND

According to (Azubuike & Okwuokei, 2013), practice of primary prevention strategies of cancer has a very strong association with knowledge and practice of early detection strategies. The study showed that not all who knew about the preventive strategies practiced it, which also revealed that there is a very strong indication that practice increases as level of knowledge increases. Additionally, (Azubuike & Okwuokei, 2013), posited that there is an existing association between the knowledge of cancer risk factors and practice of preventive strategies. Suggesting that knowledge of the risk factors seems to be a motivation to practice. The study by (Wantini & Indrayani, 2018) previously proved that there was a change in interest, which after health education as more than half of respondents were interested in doing breast self examination. Furthermore, previous study by (Haji-Mahmoodi et al., 2002) has also identified relationship between knowledge and practice of preventive procedures. However, the commonest reason reported for not practicing any of the preventive procedures was the feeling that one cannot get breast cancer, followed by lack of awareness and forgetfulness and then avoidance of fear and anxiety. Specifically, the feeling that one cannot get breast cancer' indicates disbelief and superstition. Disbelief and misconception about cancer has been reported as contributory factor to late reporting of signs and symptoms (Haji-Mahmoodi et al., 2002). North-central Zone, Nigeria is one of the six geo-political zones of the country.

The high rate of death as a result of cancer in the world is worrisome, the trend as revealed in many literatures including (World Health Organization, 2012), shows that cancer accounts for 12.5% of all deaths in the world. Cancer rank highest in terms of economic loss of all the fifteen (15) leading causes of death in the world. In Africa, home for large percentage of developing countries

is not left out of the scourge of cancer. Reports have shown that 650,000 indigenous Africans run the risk of dying from cancer out of 965 million diagnosed.

The researcher through numerous literatures that substantial proportion of all cancers is attributable to carcinogenic exposures in the environment and the workplace, and is influenced by activities in all economic and social sectors. Many of these exposures are involuntary but can be controlled or eliminated through enacting and enforcing proactive strategies for prevention strategies. The prevention strategies of cancers of environmental and occupational origin such as stopped tobacco smoking, eat healthy food, and participate in physical activities reduces cancer incidence and mortality and is highly cost effective; in fact, it is not just socially beneficial because it reduces medical and other costs, but because it averts the suffering of many human beings. Unfortunately, emphases are not on prevention strategies of cancer through avoidance of risk factors.

According to (World Health Organization, 2012), some years back, cancer was thought to be rare in Africa and cancer was seen as a disease of the developed country where cancer is only second to cardiovascular diseases in the causes of death. Based on researcher's observation, the alarming increase in the incidence of cancer is mainly due to infectious conditions including the HIV/AIDS pandemic, tobacco use, harmful use of alcohol, improper diet, physical inactivity, environmental pollution and a general increase in life expectancy predominantly among elites who are mostly found in the Ivory Tower. However, evidences have shown that knowledge of the above predisposing factors is poor. The increasing rate of cancer diagnosis in the country at large and the region in particular can be traced to the level of knowledge of cancer, attitude towards prevention strategies of cancer and practice of avoidance of the predisposing factors.

The high cases of cancer in North-Central Nigeria cannot be far away from the lack of knowledge of predisposing factors such as age, alcohol, sedentary lifestyle, Human Papilloma Virus, obesity, exposure to radiation and so on as stated by (Nnodu et al., 2010) and a perceived low level of knowledge, poor attitude towards early reporting of signs and symptoms and poor practice of prevention strategies of cancer. Specifically, a study conducted in North-Central and South-West on knowledge and beliefs towards cervical cancer shows that; all of the women in the selected focused group had no knowledge of cervical cancer. Meanwhile, most of the participants in Abuja who are Muslim women had heard about cervical cancer, but no knowledge of risk factors. However, in Ondo state, none of the women in the group of a FGD had ever heard of cervical cancer. Based on the foregoing, it is believed that a gap of adequate knowledge, negative attitude and poor practice exist in the North central geo-political zone of Nigeria. In light of the above, the researcher assessed knowledge, attitude and practice of cancer prevention strategies among staff of Federal Universities in North Central Zone, Nigeria.

## METHODS

For the purpose of this study, ex-post facto research design was adopted. Ex post facto means after the fact, design that assessed knowledge, attitude and practice of cancer prevention. The population of the study comprised of 25,361 academic and non-academic staff of the seven Federal Universities in the North-central Zone, Nigeria. All the seven Federal Universities are; University of Ilorin (4,232), University of Jos (4,140), University of Agriculture Makurdi (3,912), Federal University of Technology Minna (3,122), University of Abuja (4,510), Federal University, Lokoja (2,504), and Federal University, Lafia (2,940). The sample size for the study was 756 respondents representing 4% of the

target population. In order to achieve 756 from the population of 25,361 which was considered adequate because the Research Advisor (2006), stressed that for a population of 25,361, the number of 378 respondents are adequate. However, the researcher doubled the figure to have a wider coverage of respondents. In order to draw the desired sample, multi-stage sampling procedure was employed for the study. Multi-stage sampling procedure involves simple random sampling procedure, stratified sampling procedure and proportionate sampling procedure. The instrument for this study was a researcher-developed close-ended questionnaire. To ensure the face and content validity of the research instrument, the researcher-developed questionnaire was validated by five (5) jurors who are expert in health education, nursing sciences and measurement and evaluation. For the purpose of pilot testing of the instrument, the University of Ilorin was selected using simple random sampling technique. The selected University was similar to sampled Universities. A total of thirty (30) respondents, thus, fifteen (15) academic and fifteen (15) non-academic staff were purposively selected. Also, copies of the questionnaire were administered on the respondents in their various offices until the required number of sample size was obtained. The copies of questionnaire were retrieved on the spot and processed for reliability through a split half method, thus, the copies questionnaires were divided into two. The two halves were correlated to determine the level of reliability of the instrument with the use of Cronbach Alpha, Spearman Brown Rank Order (SBRO) and Guttman split-half. The results revealed that Spearman-Brown Split Half, Gutman Split Half and Cronbach Alpha reliability on knowledge, attitude and practice of cancer prevention strategies are 0.839, 0.813 and .859 respectively. This therefore, showed that the instrument to be used for this study was highly reliable. Descriptive statistics of mean and standard deviation were used to to answer the research

questions while Inferential statistics of one sample t-test was used to test for null hypotheses.

## RESULTS AND DISCUSSION

The question obtained in this research was what are the practices towards cancer prevention strategies among staff in Federal Universities of North-central Zone, Nigeria?

A holistic examination of Table 1 shows that the mean scores for item 11 on responses the aspect of practices towards cancer prevention strategies are less than 2.5 while the aggregate mean was 2.38 which is still less than 2.5 mean benchmark. Therefore, Practices of cancer prevention strategies among the Federal University staff was not positive. This implies that staff in Federal Universities do not practice of cancer prevention strategies.

**Table 1: Mean Score of responses on practices towards cancer prevention strategies among staff in Federal Universities of North-central Zone, Nigeria**

S/N	Item	Mean	Standard Deviation
1	I stopped tobacco smoking in order to prevent risk of cancer	2.5911	.31004
2	I eat healthy food with moderation	2.3117	.30092
3	I participate in physical activities to maintain healthy weight	3.3015	.41441
4	As a family we engage in colonoscopy every ten years	1.5125	.97334
5	As a family, we have open dialogue with the family doctor in support of important cancer preventive measures	2.0044	.36183
6	My participation in cancer screening is in accordance with medically recommended guidelines	2.1082	.30332
7	I feel infectious agents such as human papilloma virus (HPV) can lead to cervical cancer	2.5027	.32171
8	I avoid packaged foods such as beef and saturated fat that contain carcinogenic substances which can cause cancer	2.0713	.30152
9	I engage in medical test to ensure early cancer detection of cancer	2.1050	.30124
10	I avoid prolonged exposure to air pollution by pesticide, dust, chemicals that increase risk of cancer	2.3163	.31031
11	I avoid prolonged exposure to water pollution due to chemical agents that increases risk of cancer	2.6898	.31217
12	I use prescribed drugs with chemo preventive properties that can help reduce cancer risk occurrence	2.3211	.30381
13	I avoid prolonged exposure to radiations such as X-ray that increases cancer risk	2.4713	.31401
14	I ensure screening of blood before transfusion to prevent cancer	3.1115	.46232
15	I engage in educational intervention programmes on cancer so as to broaden my knowledge of risk factors	2.3011	.30128
	Aggregate mean	2.3818	

**Table 2. One sample t-test on cancer prevention strategies practices among staff of Federal Universities of North-central Zone, Nigeria**

	Mean	Std. Deviation	t-value <sup>1</sup>	Df	P-value
Aggregate mean	2.3813	0.3728	1.611	751	0.11
Constant mean	2.50	0.00			

<sup>1</sup>t (751) = 1.972, P > 0.05

A careful observation of table 2 reveals that the respondents' practice of cancer prevention strategies is significant. This is because the one-sample t-test calculated t-value is 1.611 greater than the t-critical is 1.972 at degree of freedom 751 with probability value (p= 0.11) and is greater than 0.05 level of significance. Thus, this result indeed supports the sub-hypothesis (null) which states that "Cancer prevention strategies practices by the staff in Federal Universities of North-central Zone, Nigeria is not significant". The hypothesis is therefore retained.

The results also revealed that cancer prevention strategies practices by the staff in Federal Universities of North-central Zone, Nigeria is not significant with t-value value of 1.611 which was found to be greater than the t-critical which is 1.972 at degree of freedom 751. This data clearly reveals that the hypothesis which states that there is no significant practice of cancer prevention strategies among staff of Federal Universities in North Central zone Nigeria was retained. This means that there is no significant practice of cancer prevention strategies among staff of Federal Universities in North Central zone Nigeria. This study is in line with the result of the study by (Okobia, Bunker, Okonofua, & Osime, 2006) which also showed that the use of screening methods was very low among the study subjects where only 34.9% practiced Breast Self Examination in the past year and none ever had a mammogram. However, in a study of (Jacob, Penn, & Brown, 1989) on the practice of Breast Self-Examination among black women in the United State it was found that 89.0% of respondents indicated practicing Breast Self-

Examination during the past year, 74.0% indicated having done so during the past six months, and 39.0% indicated performing self-exam monthly. Similarly, (Grunfeld, Ramirez, Hunter, & Richards, 2002) reported similar percentage of US women reporting practice of Breast Self-Examination monthly or more often. Participants in study (Okobia et al., 2006) had the right attitude towards breast cancer as majority indicated visiting the doctor for breast complaints. The use of screening methods was very low among study subjects. (Odusanya & Tayo, 2001) reported that 89% of Nurses in Lagos, Nigeria practiced Breast Self-Examination and 34.3% had Clinical Breast Examination although majority of their study participants did not know the correct time or technique for carrying out the procedure. Available of the data indicates that majority of women in the screening age group in the developed countries undergo routine screening using all three methods including monthly Breast Self-Examination, annual Clinical Breast Examination, and annual mammography (Anderson et al., 2003). In a survey of practice of Breast Self-Examination among black women in the US (Jacob et al., 1989) found that 89% of respondents indicated practicing Breast Self-Examination during the past year, 74% indicated having done so during the past six months, and 39% indicated performing self-exam monthly.

## CONCLUSION

The data of the observation clearly reveals that the hypothesis which states that there is no significant practice of cancer prevention strategies

among staff of Federal Universities in North Central zone Nigeria was retained. Poor practice of cancer prevention strategies was found among staff in Federal Universities of North-central Zone, Nigeria.

Based on the research, it is also known that activities that can as well improve people's practice such as health intervention programmes (in essence; video play, radio jingles and print media intervention) should be made available by Ministry of Health through health education for the citizens (Universities staff) so as to have improved attitude towards cancer prevention strategies Adequate intervention programmes such as informed radio jingles and health education on improved practice of avoidance of risk factors and health education on positive health behaviours should be carried out by Agencies of government (MDAs), Non-governmental organisations on Academic and Non-academic staff of Universities in North-central Zone to bridge the gap that exist between knowledge, attitude and practice.

## REFERENCES

- Anderson, B. O., Braun, S., Lim, S., Smith, R. A., Taplin, S., & Thomas, D. B. (2003). Early detection of breast cancer in countries with limited resources. *The Breast Journal*, *9 Suppl 2*, S51-9.  
<https://doi.org/10.1080/108002841860152703472>
- Azubuiké, S., & Okwuokei, S. (2013). Knowledge, attitude and practices of women towards breast cancer in benin city, Nigeria. *Annals of Medical and Health Sciences Research*, *3*(2), 155–160.  
<https://doi.org/10.4103/2141-9248.113653>
- Grunfeld, E. A., Ramirez, A. J., Hunter, M. S., & Richards, M. A. (2002). Women's knowledge and beliefs regarding breast cancer. *British Journal of Cancer*, *86*(9), 1373–1378.  
<https://doi.org/10.1038/sj.bjc.6600260>
- Haji-Mahmoodi, M., Montazeri, A., Jarvandi, S., Ebrahimi, M., Haghghat, S., & Harirchi, I. (2002). Breast self-examination: knowledge, attitudes, and practices among female health care workers in Tehran, Iran. *The Breast Journal*, *8*(4), 222–225.
- Jacob, T. C., Penn, N. E., & Brown, M. (1989). Breast self-examination: knowledge, attitudes, and performance among black women. *Journal of the National Medical Association*, *81*(7), 769–776.
- Nnodu, O., Erinoshó, L., Jamda, M., Olaniyi, O., Adelaiye, R., Lawson, L., ... Zamani, A. (2010). Knowledge and attitudes towards cervical cancer and human papillomavirus: a Nigerian pilot study. *African Journal of Reproductive Health*, *14*(1), 95–108.
- Oduşanya, O. O., & Tayo, O. O. (2001). Breast cancer knowledge, attitudes and practice among nurses in Lagos, Nigeria. *Acta Oncologica (Stockholm, Sweden)*, *40*(7), 844–848.  
<https://doi.org/10.1080/02841860152703472>
- Okobia, M. N., Bunker, C. H., Okonofua, F. E., & Osime, U. (2006). Knowledge, attitude and practice of Nigerian women towards breast cancer: a cross-sectional study. *World Journal of Surgical Oncology*, *4*, 11.  
<https://doi.org/10.1186/1477-7819-4-11>
- Wantini, N. A., & Indrayani, N. (2018). Effects of an educational intervention on breast cancer among female adolescent in High School of 1 Turi, Sleman. *Journal of Health Education*, (Vol 3 No 1 (2018): Journal of Health Education), 29–36.
- World Health Organization. (2012). *Obesity: Preventing and managing the global epidemic. Report of a WHO consultation. (WHO Technical Report Series, No. 894).*