JOPER
JOURNAL OF PHYSICAL EDUCATION RESEARCH

Journal of Physical Education Research, Volume 8, Issue III, September 2021, pp.41-47
ISSN: Print-2394 4048, Online-2394 4056

INFLUENCE OF DEMOGRAPHIC CHARACTERISTICS ON KNOWLEDGE OF CANCER PREVENTION

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How to cite this article: Akorede, S. N. (September 2021). Influence of demographic characteristics on knowledge of cancer prevention. Journal of Physical Education Research, Volume 8, Issue III, 41-47.

Received: April 15, 2021 **Accepted:** September 02, 2021

ABSTRACT

This study assessed the influence of demographic characteristics on knowledge of cancer prevention among staff of Federal universities in North Central Zone, Nigeria. To achieve this purpose, ex-post facto research design was used. A total of 378 staff from seven federal universities in north central zone Nigeria with a population of 25,361 (twenty-five thousand three hundred and sixty-one) were selected through multi-stage sampling procedures. Finally, a sample of 378 was obtained. The reliability of instrument used for the study was 0.839. Out of the 378 copies of questionnaire distributed for data collection only 376 were found valid for analyses. Inferential statistics of Analysis of Variance was used to test the data collected. The results revealed that the staff of federal university had influence on knowledge, towards cancer prevention with p=0.000 at 0.05 level of significance. Based on the results it is concluded that, the demographic characteristics of Staff in federal universities of North-central Zone, Nigeria influence Knowledge of cancer prevention among staff in federal universities of North-central Zone, Nigeria. It was recommended that concerned agency should double effort in ensuring that federal university staff are knowledgeable about cancer and adequate intervention programmes such as inform of radio jingle, health education on improved practice towards avoidance of risk factors.

Keywords: *Cancer, prevention, demographic, knowledge.*

1. INTRODUCTION

Cancer is a major public health concern affecting all categories of individuals worldwide. It is believed that cancer is the second most common cause of death in developed countries and among the three leading causes of death in developing countries including Nigeria. In the light of the above, Qalawa, Mohamed and Eltay (2013), asserted that cancer is now the second leading cause of death, after cardiovascular diseases worldwide, approximately 10 million people are diagnosed with cancer annually and more than 6 million die of the disease every year.

It will be of interest to understand this health condition known as cancer, which according to America Cancer Society (2014), starts when cells in any part of the body begin to grow out of control, the word cancer is an umbrella term that refers to about 200 diseases that share two common characteristics which are; an uncontrolled growth of cells and the ability to invade and damage normal tissues either locally or at distant sites in the body. In addition, World Health Organisation (2012), also described cancer as a generic term for a large group of diseases that affect any part of the body, hence, malignant tumour is often used to describe cancer. A defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, and which can then invade adjoining parts of the body

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and spread to other organs. This process is referred to as metastasis which is the major cause of death from cancer patient.

Quite a number of risk factors have been mentioned by Nnodu et al., (2010) as modifiable factors such as use of tobacco, age, unhealthy diet, infectious agents like Human Papilloma Virus (HPV), hepatitis B virus, helicobacter bacterium, ultra violet radiation, physical inactivity, occupational exposures, food contaminants such as aflatoxin, ionizing radiation, and obesity. Non-modifiable risk factors include ageing, ethnicity, heredity, sex, immunosuppression and reproduction. This simply means that modifiable risk factors could be prevented.

According to a study in America on knowledge of cancer risk and survival conducted by Breslow, Sorkin, Frey, and Kessler (2011) it was revealed that majority of respondents used for the study were unable to identify major cancer risk factors when exposed to a list of risk factors. Approximately two-thirds did not recognize that age increased the risk for breast and colon cancer, that diet increased the risk for colon cancer, or that multiple sex partners increased the risk for cervical cancer. In a related version, a study conducted in Nigeria by Nnodu et al., (2010) on the Knowledge, Attitude and Practice of Cervical cancer, revealed that respondents were asked if they know of cervical cancer and human papilloma virus. The outcomes indicates that very small proportions know about these diseases and overwhelming majority of the respondents said that cervical cancer and human papilloma virus could not be prevented. This revelation is an indication that the knowledge of cancer was low.

North-central Zone, Nigeria is one of the six geo-political zones of the country. The zone is the most unique region in the country consisting of seven (7) states including the Federal Capital Territory (FCT). The zone has combinations of several ethnic groups that can be referred to as a little representation of the entire country. North Central Nigeria zone consist of; Kwara (Yoruba), Kogi state (Igbira, Yoruba, & Igala), Abuja (Gbwari), Nasarawa state (Hausa), Niger state (Hausa, Nupe & Fulani), Plateau State (Beerom, Ganang, Afizere), Benue State (Tiv & Idoma). This shows a fair distribution of ethnic groups in Nigeria. Thereby creating a research population that is capable of generalization. These facts necessitate a study on assessment of knowledge of cancer prevention strategies among staff of Federal Universities in North-central zone, Nigeria. The high rate of death in the world is worrisome, the trend as revealed in many literatures including W.H.O. (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 observed 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 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.

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 Papiloma 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 believes 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. Akorede, Getso, Abdulfatah, Nofiu and Oladipo (2018) found that Knowledge of Cancer Prevention Strategy existed in North Cental, Nigeria. However, in Ondo state, none of the women in the group of a FGD had ever heard of cervical cancer. Based on the forgoing, 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.

2. METHODS AND MATERIALS

2.1 Participants and Sampling Technique

For the purpose of this study, ex-post facto research design was used. The population of the study comprised of 25,361 academic and non-academic staff of the 7 Federal Universities in the North-central Zone of Nigeria. The sample size for the study was 378 respondents representing the target population. In order to draw the desired sample, multi-stage sampling procedure was employed for the study. Multi-stage sampling procedure involves more than two sampling procedures and for this study the following procedures were used.

2.2 Tools for the Study

The instrument for this study was a self-made close-ended questionnaire. To ensure the face and content validity of the research instrument, the developed questionnaire was validated by five (5) experts in the Departments of Human Kinetics and Health Education, Nursing Science and Veterinary Public Health of Ahmadu Bello University, Zaria. 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 was a confirmation of test of reliability which according to Spiegel (1992), revealed that, the instrument is considered reliable if it's reliability coefficient lies between 0 and 1, and that the closer the calculated reliability coefficient is to zero, the less reliable is the instrument, and the closer the calculated reliability co-efficient is to 1, the more reliable is the instrument. This therefore, showed that the instrument to be used for this study was highly reliable.

2.3 Procedure for Data Collection

Five research assistants were instructed by the researcher on procedures for data collection. The focus of the research was also discussed with the research assistants so as to be able to explain clearly to the respondents how they are to fill the questionnaire. The procedure for

data collection took 5 weeks. The data was however collected with the help of the 5 trained research assistants in the following order; week one, the researcher and research assistants proceeded to Federal University of Technology Minna, the researcher's team embarked on office to office visitation to identify and determine whether such individual whose office was visited was an academic or non-academic staff. All copies of questionnaire distributed were retrieved, however, of all the 378 administered questionnaire, only 376 copies of the questionnaire were found valid for Analyses.

2.4 Data Analysis

Analysis of Variance was used for testing the influence of demographic characteristics (age, level of education, religion) on knowledge, attitude and practice of cancer prevention strategies among staff of Federal Universities in North-central Zone, Nigeria. This becomes necessary because the variables of demographic characteristics to be measured are many whose influence are to be determine on the knowledge of cancer prevention strategies.

3. RESULTS

Table 1: Mean score of responses on the influence of level of education on knowledge, of cancer prevention strategies

	Mean	SD	Mean Difference
Level of Education (Constant)	33.636	9.129	13.857
Knowledge	47.793	11.543	

In above Table 1, the mean score on the influence of level of education on knowledge of cancer prevention strategies are presented which shows that mean score of level of education was 33.636 and mean score of knowledge was 47.793 with mean difference of 13.857.

Table 2: Mean score of responses on the influence of religious on knowledge of cancer prevention strategies

	Mean	SD	Mean Difference
Religious(Constant)	31.911	8.319	15.882
Knowledge	47.793	9.543	

In above Table 2, the mean score on the influence of level of education on knowledge of cancer prevention strategies are presented which shows that mean score of religious was 31.911 and mean score of knowledge was 47.793 with mean difference of 15.882.

Table 3: Mean score of responses on the influence of age on knowledge of cancer prevention strategies

	Mean	SD	Mean Difference
Age (Constant)	39.702	8.319	8.091
Knowledge	47.793	9.543	

In above Table 3, the mean score on the influence of level of education on knowledge of cancer prevention strategies are presented which shows that mean score of age was 39.702 and mean score of knowledge was 47.793 with mean difference of 8.091.

Table 4: Analysis of Variance on Influence of Level of Education on Knowledge of Cancer Prevention strategies.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.008	4	2.003	15.016	0.000
Residual	133.492	371	1.196		
Total	139.500	751			

Table 4 shows outcome of multiple regression analysis on influence of level of education on knowledge of cancer prevention strategies. Result indicates level of education significantly aid the knowledge of cancer prevention strategies, critical $F = 3.09$ at (2, 379) = 15.016, p = 0.000. Based on this outcome, the null hypothesis one is rejected as significant influence of level of education on knowledge of cancer prevention strategies was found.

Table 5: Analysis of Variance on Influence of Religion on Knowledge of Cancer Prevention strategies

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.008	3	2.003	11.490	0.000
Residual	133.492	372	1.196		
Total	139.500	751			

Observation of Table 5 indicates that religion significantly aid the knowledge of cancer prevention strategies, critical $F = 3.09$ *at* (3, 372) = 11.490, p = 0.000. Based on this outcome, the null hypothesis two was rejected as significant influence of religion on knowledge, attitude and practice of cancer prevention strategies was found

Table 6: Analysis of Variance on influence of age on knowledge of cancer prevention strategies.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.108	3	1.103	11.106	0.001
Residual	91.112	372	2.011		
Total	97.220	751			

A careful observation of Table 6 shows outcome of multiple regression analysis on influence of age on knowledge of cancer prevention strategies. Result indicates age significantly aid the knowledge, attitude and practice of cancer prevention strategies, critical $F = 3.09$ *at* (3, 372) = 11.106, p = 0.000. Based on this outcome, the null hypothesis three is rejected as significant influence of age on knowledge of cancer prevention strategies was found.

4. DISCUSSION

The results revealed that there is significant influence of demographic characteristics of respondents (level of education, religion and age) on knowledge of cancer prevention strategies in Federal Universities of North-central Zone, Nigeria. This is in line with Pokhrel, Martikainen, Pukkala, Rautalahti, Seppä and Hakulinen (2010) that high education has been found to help the patient in navigating through health care and in its systems that may appear complicated. Among those with highest education level, the highest survival proportions were observed in the health-conscious group, which, for example, exercises more than the others. Other life-style factors such as smoking and consumption of alcohol may also lay behind the relatively low survival proportions in those with the shortest education. The risk of

encountering cancer has a clear relationship with social class and occupation but the risk is not always highest in the lowest socio-economic strata. The new study of Pokhrel et al., (2010) shows now that the most educated had systematically higher cancer-specific survival proportions in the 27 cancer types in the study.

5. CONCLUSION

Based on the findings of this study, it was concluded that-

- Demographic characteristics of respondents (level of education) had influence knowledge of cancer prevention strategies in Federal Universities of North-central Zone, Nigeria.
- Demographic characteristics of respondents (religion) had influence knowledge of cancer prevention strategies in Federal Universities of North-central Zone, Nigeria
- Demographic characteristics of respondents (age) had influence knowledge of cancer prevention strategies in Federal Universities of North-central Zone, Nigeria

Since it has been established that adequate and positive knowledge of cancer prevention strategies and attitude exist among staff of Federal University in North-central Zone, but their practice of cancer prevention strategies was found to be grossly inadequate, based on the foregoing, the researcher made the following recommendations:

- Concerned agencies (in essence; Cancer Foundations, WHO, ACS and NCI) and Ministries Departments and Agencies of government should double effort in ensuring that knowledge and attitude of Universities staff and the general populace about cancer prevention strategies is sustained
- 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 organizations on Academic and Non-academic staff of Universities in North-central Zone to bridge the gap that exist between knowledge, attitude and practice.

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