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Editorial

African Journal of Nursing and Health Issues (AJoNHI), an official journal of the Department of Nursing, University of Ibadan, serves as a forum where scholars in the health system contribute to the quality of health care services. The journal offers opportunities for nurse practitioners, nursing students and other health personnel to disseminate their views on significant health issues. The journal welcomes articles from diverse area of nursing and other health related disciplines. AJoNHI comprises of two volumes of interesting papers.

AJoNHI Vol. 2 No. 1 contains the following articles:

1. Knowledge and practice of pre-marital sex and use of condom among senior secondary school students in Ibadan, Oyo State Nigeria. The emphasis of the paper is on sexuality education for secondary school students and the use of condom to prevent unwanted pregnancy and abortion.
2. Perceived needs and social support among women living with schizophrenia in a state hospital in Ibadan. The focus of the paper is on how women living with schizophrenia would have access to health personnel especially nurses who are said to be knowledgeable about available resources that can assist women in making a choice about suitable resources in the community.
3. Sociocultural context of cancer management in Nigeria. This is a review article which views cancer within the matrix of social and cultural environment in terms of its perception and influence of socio-cultural construct on the management of cancer.
4. Reflective analysis of nursing management of sickle cell pain. The paper highlights the concept of reflective analysis in nursing management of sickle cell pain in children.

AJoNHI Vol. 2 No. 2 consists of three Scientific and one review articles:

1. Knowledge of personal and environmental factors as predictors of coronary heart diseases among non-academic staff of higher institutions in Abeokuta, Ogun State, Nigeria. The paper explores the predictors of coronary heart diseases and recommends preventive measures.
2. Perceived influence of knowledge, attitude and practice on exclusive breastfeeding among nursing mothers in Ibadan, Nigeria. The article emphasizes the importance of exclusive breast-feeding as the best way to establish a child's immunity right from birth. It recommends that mothers should be adequately educated on the practice of exclusive breastfeeding.
3. Perception and practice of breast self-examination for early detection of cancer among female undergraduates in the University of Ibadan, Nigeria. The article identifies breast cancer as common cause of high mortality in women, it stresses the importance of breast self-examination in the early detection and management of breast cancer.
4. Rehabilitation of the disabled in Nigeria: Implications for Action. This is a review article with the focus on the policies that need to be put in place to promote and support rehabilitation of people with disabilities to achieve social inclusion and equal opportunities for people living with disabilities.

All the papers contribute positively to knowledge and I will like to commend the efforts of all the contributors for making the publication of this edition possible and worthwhile.

F.A. Okanlawon, RN, Ph.D, FWACN
Editor-in-Chief

Notes for Contributors

The African Journal of Nursing and health issues invite manuscripts which are directed to nursing; from nursing and other related disciplines. Manuscripts may be stimulating research reports, short papers describing a new method of approach to nursing, theoretical formulations and other related articles relevant to nursing and health issues.

Following are guidelines for the preparation and submission of manuscripts.

Manuscript Preparation:

Title Page

The title should be brief and specific. Indicate author(s), Qualifications and affiliation(s). Indicate source of support if appropriate. Specify preference for author description to be used in footnote on the first page of the published article.

Abstract

This should be typed, double-spaced, on a separate page and is not to exceed 300 words. It should be factual, comprehensive, and meaningful on its own.

Key Words

List three to six concise terms for indexing purposes on a separate page following the abstract.

Text

The text of the article should include the following sections: Introduction, materials and methods, results and discussion. Subheadings in the materials and methods, results and discussion sections should be used as necessary to aid organization and presentation, but sub-headings should not be numbered. All the section should be written concisely. Word limit: 5000.

Format

Manuscripts should be typewritten and double-spaced on 8½ x 11" white bond paper with ½" margins on all sides. Each page, including tables, legends, and references, should be numbered consecutively. Quotations must be accurate and give full credit to source. Permission to quote and reproduce material previously published must be cleared by the author, and a copy of the letter granting such permission should accompany the manuscript. When reporting units of measure, please use the International System of Units value, with the conventional unit equivalent in parentheses. The length of an article in printed form can be determined from the equation of 3½ typewritten manuscript pages to one unbroken page of text in the Journal. Article length will necessarily vary according to subject matter and style, but authors should generally aim for manuscripts of between 1 and 15 pages unless the Editor has given specific approval otherwise. Submission of the final accepted manuscript in electronic form is encouraged by the Publisher. The preferred medium is a Microsoft Word file on a rewritable CD.

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Tables should be typed single spaced and placed appropriately. Excessive width and length should be avoided as they necessitate a considerable reduction in type size. Tables should be numbered consecutively, separate from the illustrations, and each should contain a brief, descriptive title. The data presented must be logically and clearly organized; it should be self-explanatory and supplement, not duplicate the text.

Illustrations

Illustrations are encouraged. For photographs, submit black and white glossy prints and on the back of each, lightly write in pencil the figure number, the last name of the senior author, and an indication of which is the top edge of the picture when not obvious. Drawings (including graphs and charts) should be done in black india ink on heavy white

paper and, ideally, be approximately twice their intended final size. Lettering should be large enough to allow for size reduction, and preferably done professionally.

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Knowledge of Personal and Environmental Factors as Predictors of Coronary Heart Diseases among Non-Academic Staff of Higher Institutions in Abeokuta, Ogun State, Nigeria

By

S.A. Famuyiwa (Ph.D)
Email: famuyiwasikiruaderemi@yahoo.com
Phone No.:07060518704

and

Olanike Grace Amusa
Email: Amusaolanike@ymail.com
Phone: 07064375712
Department of Human Kinetics and Health Education,
University of Ibadan

Abstract

Background: The scourge of coronary heart diseases is an increasing phenomenon worldwide. It is a challenge that has posed a greater risk on the health of people of both the developed and developing countries. The purpose of this study was to determine the knowledge of personal and environmental factors as predictors of Coronary Heart Diseases among non-academic staff of higher Institutions in Abeokuta Ogun State Nigeria.

Methods: Descriptive survey research design was used for the study.It was delimited to non-academic staff of higher institutions in Abeokuta, Ogun State Nigeria. One thousand (1000) samples were randomly selected within the total population of the study. A self developed structured questionnaire was used as instrument for data collection, a reliability coefficient of 0.74 was obtained. Data were analyzed using SPSS. Version 14. Regression statistical techniques were applied to test hypotheses at 0.05 level of significant.

Result: Four hypotheses were gathered, tested and analyzed using descriptive statistics of frequency counts, bar charts, pie chart and regression to test all hypotheses at 0.05 alpha level of significance. It was find out based on the results of findings that age, sex and genetic that are non-modifiable factors predisposing coronary heart disease produced $F_{,(3/996)}=11.296$, $P< .05$ while modifiable factors of physical inactivity, diet and alcoholism significantly predisposed the development of coronary heart disease, levels $F_{,(3/996)}=11.511$, $P< .05$. Environmental factors of work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria significantly predisposed the development of coronary heart disease. $F_{,(3/996)} =12.624$, $P< .05$. The results also showed the relative contributions of all the variables in the development of coronary heart disease $F_{,(9/990)} =7.204$, $P< .05$

Conclusions: According to the findings, it was recommended that there should be a national flag off of the awareness on prevention of Coronary Heart Disease as it is one of the major killer of sudden death, there should be a quarterly seminar for the non-academic staff of higher institution on the knowledge of coronary heart disease as well as the risk factors that predisposed people to this condition

Key Words: Coronary, heart, disease, knowledge, personal, environmental

Introduction

Coronary heart disease was defined by[1] Park (2007) as the impairment of heart function due to inadequate blood flow to the heart com-pared to its needs, caused by obstructive changes in the coronary circulation to the heart.[2] Thomas, et al. (1998) observed that Coronary heart disease is the most common cause of sudden death in developed and developing countries.

In a study carried out by University of Benin Teaching Hospital, Benin City, Nigeria on Physical activity and cardiovascular risk factors in a developing population, it was reviewed that physical inactivity among the non-academic staff in Nigeria has led to majority of coronary heart disease cases in the country as majority of them do less work and spent more time sitting due to the advent of technology[3].

According to WHO, Work pattern in African countries are becoming more sedentary in nature. In Nigeria, job in tertiary institutions could be considered as a sedentary job because it basically involves sitting and spending many hours in the office [5].

In United States of America, 17.6 million people had the condition in 2006 during that year CHD caused the death of over 425,000 individuals in America[6]. The aetiology of CHD is a multifactor, apart from the obvious ones such as age, sex and genetics, studies have identified several other risk factors (i.e; factors that make the occurrence of the diseases more probable). According to WHO, death resulting from coronary heart disease in Nigeria reached 71,732 of total death. Coronary heart disease risk was calculated from the ratios of high- density lipoprotein cholesterol to total cholesterol, respectively [8].

It was stated by Jani and Rajkumar that sex is also an uncontrollable factor in the development of coronary heart disease. It was reported that men are at greater risk of heart disease than pre-menopausal women. Among middle-aged people, coronary heart disease is 2 to 5 times more common in men than in women. In a study conducted by the World Health Organization, sex contributes to approximately 40% of the variation in the sex ratios of coronary heart disease mortality[10].

Genetic was reviewed by Rattue (2011) as another uncontrollable factor in the development of coronary heart disease[6]. Individuals who had at least one biological parent with coronary heart disease had a 40-60% higher risk of developing the disease than those whose parents do not suffer from coronary heart disease. It was reviewed that the disease is also transferred via the genes. Parental history of high blood pressure can also contribute to a higher risk of heart disease in an individual.

Physical inactivity has been reported to be inversely associated with blood pressure, lipid profiles, obesity, and insulin sensitivity[10] identified risk factors for coronary heart disease in Jos, Nigeria and found that alcohol consumption was highly prevalent in a random sample of 250 households[11]. In a study in a community dwelling of urban and rural participants in Kenya, it was found that excess alcohol consumption was related to increase likelihood of glucose intolerance among men[12]. According to WHO (2005), it was stated that a diet high in fat (particularly saturated fat), sodium and sugar and low in complex carbohydrates, fruit and vegetables increases the risk of CHD[2, 13].

Consequently, inaccessibility of recreational facilities are major risk factors for health related problems like coronary heart diseases, obesity, hypertension, diabetes and stroke that are affecting workers, the levels of physical inactivity are partly due to inaccessibility of recreational sports during leisure time

increase sedentary behaviour during occupational activities as evident in several sector of Nigeria[7]. Most schools cafeterias sell foods to workers outside of the school meal programmes. These so-called "competitive foods" are widely available in the cafeteria, vending machines, and school stores[14]. Students and workers ate competitive foods on a given school day, mostly foods high in calories and low in nutritional value, otherwise known as junk food[15] observed that eating competitive foods has been linked with poorer quality diets and increased risk of calories that obstruct the function of the arteries that supply blood to the heart in several studies[16]. In addition to unhealthy foods, low level cafeterias have long provided a ready supply of sugar-sweetened beverages to the school environment, according to Tan (2008) which are linked to increased risk of obesity and diabetes which are some of the risk factors to coronary heart disease[17].

Symptoms of Coronary Heart Disease

CHD Symptoms may be very noticeable, but sometimes you can have the disease and not have any symptoms. This is especially true in the early stages of heart disease[18]. Chest pain or discomfort (angina) is the most common symptom. You feel this pain when the heart is not getting enough blood or oxygen. How bad the pain is varies from person to person. It may feel heavy or like someone is squeezing your heart. You may feel it under your breast bone (sternum), but also in your neck, arms, stomach, or upper back. The pain usually occurs with activity or emotion, and goes away with rest or a medicine called nitroglycerin. Other symptoms include shortness of breath and fatigue with activity (exertion)[19].

Risk Factors of Coronary Heart Disease

The following are confirmed independent risk factors for the development of CD: Risk factors can be classified as: Non modifiable: age, sex, family history. Modifiable: diet, alcoholism, physical inactivity[20]. Other risk factors includes; lack of exercise, consumption of alcohol, stress, diet rich in saturated fats, genetic, age, smoking, hypertension (high systolic pressure seems to be most significant in this regard)[21].

Consequences

***Stable Angina*:** Angina is a squeezing pain or pressing feeling in the chest caused by blockages in arteries that supply the heart[22].

***Unstable Angina*:** Unstable angina is the first sign of a heart attack. When the pattern of pain changes, occurs without activity or worsens with mild activity, it's a danger sign of unstable angina[23].

***Myocardial Infarction*:** This is a medical term used to describe a heart attack. The U.S. National Institutes of Health describes a heart attack as a period when the heart muscle is unable to get enough oxygen to maintain cell life and the heart muscle is permanently damaged.

***Heart Failure and Arrhythmias*:** Angina may lead to small areas of the heart that suffer from ischemic heart damage due to lack of oxygen. It was explains by Agunbiade et al. that when there is acute or chronic ischemic damage caused by coronary heart disease, it can affect the mechanical and electrical abilities of the heart muscle[8]. These changes can lead to heart failure and heart arrhythmias that are not curable.

Research Objectives

The following are the objectives of this study:

1. To examine the extent of knowledge of personal factors predisposing non-academic staff to coronary heart diseases in Abeokuta, Ogun State.
2. To examine the extent of knowledge of environmental factors predisposing non-academic staff of higher institutions in Abeokuta, Ogun State.
3. To examine personal factors as predicting factors in the development of coronary heart disease among non academic staff of higher institutions in Abeokuta, Ogun State.
4. To examine environmental factors as a predicting factors in the development of coronary heart disease among non academic staff of higher institutions in Abeokuta, Ogun State.

Research Questions

The following are the research questions for this study:

1. Do non-academic members of staff of higher institution in Abeokuta metropolis have the knowledge of personal factors in the development of coronary heart diseases?
2. What is the extent of knowledge do non-academic staff of higher institutions in Abeokuta, Ogun State concerning environmental factors that predispose coronary heart disease?

Research Hypotheses

The following hypotheses were tested in this study:

- Non modifiable personal factors (Age, sex and genetic) will not jointly contribute to the development of heart diseases.
- Modifiable personal factors (physical inactivity, alcoholism and poor diet) will not jointly contribute to the development of heart diseases.
- Environmental factors (work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria) will not jointly contribute to the development of heart diseases.
- There will be no significant relative contributions of (Age, sex, genetic, physical inactivity, alcoholism, poor diet, work environment, inaccessibility of recreational facilities and unavailability of high quality cafeteria) on development of heart diseases.
- There will be no composite contribution of knowledge of personal and environ-mental factors in the development of heart diseases among non-academic staff of Higher Institution in Abeokuta, Ogun State.

Methodology

Research Design

Descriptive survey research design was adopted, the descriptive survey design was considered appropriate because it involves collection of information concerning the problems from the representative sample of the group without manipulating the environment and based on the information collected, conclusion are drawn to represent the opinion of the entire population.[26] observed that the descriptive survey research methods is employed when a researcher is interested in describing the characteristics of a population and does not attempt to manipulate variables but describe variables and their relationships as they naturally occur.

Population

The population comprises of all non-academic staff of Public higher Institutions in Abeokuta Ogun Nigeria (Federal University of Agriculture

Abeokuta, Moshood Abiola Polytechnic and Federal College of Education Osiele) in Abeokuta, Ogun State.

Sample and Sampling Technique The sample size for this study was 1000, proportionate and purposive sampling technique was used to select 81% (1000) of the respondents from the total population of 1235 of all non- academic staff in the three institutions.

Table 5.1:

	Name of Higher Institutions	Total no of Non-academic Staff	81% of the total no of Non-Academic Staff
1.	Federal University of Agriculture	338	274
2.	Moshood Abiola Polytechnic	489	396
3.	Federal College of Education, Osiele	408	330

Source: Federal University of Agriculture, Moshood Abiola Polytechnic and Federal College of Education, Osiele

Research Instruments
The research instruments used for this study was self developed, structured questionnaires. Four research instruments was used as follows: section A elicit information on Demographic data of the respondents, sections B was used to obtained information on non-modifiable personal factors, section C modifiable and section D elicit information on the environmental factors predicting coronary heart disease.

Procedure for data Collection
The researchers administered the questionnaire with the help of five other (5) trained research assistants. For easy understanding and accurate response to the questionnaires, a guideline concerning the completion of the questionnaire was presented to the respondents. They were required to tick the appropriate response that best represent their opinions; questionnaires were collected on the spot after completion from the respondents.

Procedure for Data Analysis
The completed questionnaires were collected, coded and analyzed using descriptive statistics of frequency counts, charts, percentages to analyze section A (demographic information of the respondents) and inferential statistics of regressions to test all the hypotheses at 0.05 level of significance.

Result and Discussion of Findings
The result of the finding on knowledge of personal and environmental factors as predictors of coronary heart disease among Non-academic staff of higher institution, Abeokuta Ogun State is presented in this section. Two research questions were answered and five hypotheses tested. The data were analyzed using frequency counts, percentages, pie and regression analysis.

Socio-Demographic Characteristics of Respondents

Table 5.2: Frequency and Percentage Distribution of Age Group of Respondents

Variables		Frequency	Percentage %
Age Group	20 to 29 years	227	22.7
	30 to 39 years	568	56.8
	40 to 49 years	159	15.9
	50 years and Above	46	4.6
	Total	**1000**	**100.0%**

Table 5.2 shows the frequency distribution according to age group. The result shows respondents age ranged of 30 to 39 years 568 (56.8%), age ranged of 20 to 29 years as 227 (22.7%), while age ranged of 40 to 49 years was 159 (15.9%), and age ranged of 50 years and above was 46 (4.6%) of the total respondents. This implies that respondents within the age ranged of 30 to 39 years have the highest percentage.

Table 5.3: Frequency and Percentage Distribution of Sex of Respondents

Variable		Frequency	Percentage %
Sex	Male	409	40.9
	Female	591	59.1
	Total	**1000**	**100.0%**

Table 5.3 shows the frequency distribution according to sex. The result shows high percent of respondents gender with female as 591 (59.1%), while male were 409 (40.9%). This implies that the female have a higher percentage in attempting the questions been asked than male.

Table 5.4: Frequency and Percentage Distribution of Respondents based on Marital Status

Variables		Frequency	Percentage %
Marital Status	Single	141	14.1
	Married	786	78.6
	Divorce	62	6.2
	Widow	11	1.1
	Total	**1000**	**100.0%**

Table 5.4 shows a higher percentages of married as 786 (78.6%) while single were 141 (14.1%) and divorce were 62 (6.2%), while widow was 11 (1.1%). It implies that married respondents have higher percentage

Table 5.5: Frequency and Percentage Distribution of Respondents based on Religion

Variables		Frequency	Percentage %
Religion	Christian	454	45.4
	Muslim	470	47.0
	Traditional	63	6.3
	Others	13	1.3
	Total	**1000**	**100.0%**

Table 5.5 shows a higher percentages of Muslim as 470 (47.0%) while Christian were 454 (45.4%) and Traditional were 63 (6.3%), while other religion was 13 (1.3%). It implies that Muslim religion have higher percentage among the respondents.

Table 5.6: Frequency and Percentage Distribution of Respondents based on Educational Qualification

Variables		Frequency	Percentage %
Qualification	WAEC	62	6.2
	Diploma	108	10.8
	OND	145	14.5
	NCE	217	21.7
	HND	260	26.0
	Degree	121	12.1
	Master	82	8.2
	Others	5	0.5
	Total	**1000**	**100.0%**

Table 5.6 shows a higher percentages of HND holders as 260 (26.0%) while NCE were 217 (21.7%) and OND were 145 (14.5%), while degree holders was 121 (12.1%), and diploma holders were 108 (10.8%), Master degree holders were 82 (8.2%), and WAEC were 62 (6.2%) while others qualification were 5 (0.5%). It implies that HND holders have higher percentage.

Table 5.7: Frequency Distribution of Years Working Experience

Variables		Frequency	Percentage %
Years of experience	0 to 10 years	360	36.0
	11 to 20 years	548	54.8
	21 to 30 years	83	8.3
	30 years and above	9	0.9
	Total	**1000**	**100.0%**

Table 5.7 shows that the frequency distribution according to the years of working experience. The result shows respondents year ranged of 11 to 20 years 548 (54.8%), and year ranged of less than 1 year as 360 (36.0%), while year ranged of 21 to 30 years was 83 (8.3%), and year ranged of 31 years and above was 9 (0.9%) of the total respondents. This implies that respondents within the year ranged of 11 to 20 years have the high percentage.

Research Questions

Research Question 1

Do non-academic members of staff of higher institution in Abeokuta metropolis have the knowledge of personal factors in the development of coronary heart diseases?

Table 5.8: Showing the Personal Factors

S/N	Variables	SA (%)	A (%)	D (%)	SD (%)	TOTAL (%)
1	Older people are at risk of developing coronary heart disease.	251(25.1)	212(21.2)	373(37.3)	164(16.4)	1000(100%)
2	Men are predisposed to coronary heart disease than women.	121(12.1)	206 (20.6)	368(36.8)	305 (30.5)	1000(100%)
3	Family history of coronary heart disease predisposed and individual to the diseases	85 (8.5)	152 (15.2)	497(49.7)	266 (26.2)	1000(100%)
4	Lack of exercise will increase in individuals chance of developing coronary heart disease.	84 (8.4)	153 (15.3)	388(38.8)	375 (37.5)	1000(100%)
5	Drinking alcohol will increase an individuals chance of developing coronary heart disease.	72 (7.2)	132 (13.2)	475(47.5)	321 (32.1)	1000(100%)
6	Lack of fruits and vegetables in meals will increase one chance of developing coronary heart disease.	60 (6.0)	127 (12.7)	415(41.5)	398 (39.8)	1000(100%)

Research question one investigated if the non-academics staff of higher institution have knowledge of personal factors in the development of coronary heart diseases. Table 5.8 shows that 53.7% of the total respondent disagree that older people are at risk of developing coronary heart disease, while 46.3% agree with the statement. Also, 67.3% disagree that men are predisposed to coronary heart disease than women, while 32.7% agree with the statement. 76.3% disagree that family history of coronary heart disease pre-disposed and individual to the diseases, while 23.7% agree with the statement. In-addition, 76.7% disagree that lack of exercise will increase an individuals chance of developing coronary heart disease, while 23.7% agree with the statement. 79.6% of the total respondents disagree that drinking alcohol will increase an individuals chance of developing coronary heart disease, while 20.3% agree with the statement. Also 81.3% of the total respondents agree that lack of fruits and vegetables in meals will increase one chance of developing coronary heart disease, while 18.7% agree with the statement.

The findings revealed that non-academic staff of higher institution in Abeokuta metropolis do not have the knowledge of personal factors in the development of coronary heart diseases.

Research Question II

What is the extent of the knowledge that non-academic staff of higher institution in Abeokuta, Ogun State have concerning environmental factors that predisposes coronary heart diseases?

Table 5.9: Showing the Environmental Factors

S/N	Variables	SA (%)	A (%)	D (%)	SD (%)	Total (%)
1.	Lack of physical activities environment will increase ones chance of developing coronary heart disease	60(6.0)	122(12.2)	485(48.5)	333(33.3)	1000(100%)
2.	Lack of accessibility to recreational facilities will increase ones chance of developing coronary heart disease.	41(4.1)	116(11.6)	459(45.9)	384(38.4)	1000(100%)
3.	Lack of high quality food will increases ones chance of developing coronary heart disease.	32(3.2)	105(10.5)	466(46.6)	397(39.7)	1000(100%)

Research question two investigated the respondents knowledge of table 5.9 showing that 81.8% of the total respondents disagree that lack of physical activities environment will increase ones chance of developing coronary heart disease, while 19.5% disagree with the statement. Also, 84.3% disagree that lack of accessibility to recreational facilities will increase ones chance of developing coronary heart disease, while 15.7% agree with the statement. 86.3% disagree that lack of high quality food will increase ones chance of developing coronary heart disease, while 13.7% agree with the statement.

The finding revealed that non-academic staff on higher institution in Abeokuta, Ogun State do not have the knowledge concerning environmental factors that predispose coronary heart diseases.

Hypotheses Testing

Hypothesis I

Non modifiable personal factors (age, sex, genetic) will not jointly contribute significantly to the development of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State.

Table 5.9.1: Regression Summary of Relationship among Age, Sex, Genetic, on Development of Heart Diseases

R= 0.181 **R Square= 0.033** **Adjusted R Square= 0.030**						
Model	Sum of Squares	Df	Mean square	F	Sig.	Remark
Regression	789.895	3	263.298	11.296	P<0.05	S*
Residual	23216.069	996	23.309			
Total	**24005.964**	**999**				

$F_{,(3/996)}$=11.296, P< .05. Significant at 0.05 level

Table 5.9.1 shows the Multiple Regression Correlation Coefficient (R), indicating the relationship among age, sex, and genetic is 0.181. This implies that there was relationship among non-modifiable personal factors (age, sex and genetic) significantly predicting the development of heart diseases among non-academic staff of Higher Institution in Abeokuta, Ogun State. R square is equal to 0.033 while adjusted R square is equal to 0.030. Therefore, non-modifiable personal factors (age, sex and genetic) contributed 3.3 percent to variance in the development of heart diseases among

non-academic staff of higher institution in Abeokuta, Ogun State.

Further verification to test the significance of the relationship using Regression ANOVA produced $F_{,(3/996)}$ =11.296, P< .05. Since P value was less than 0.05 alpha levels, research hypothesis one is therefore rejected. The result showed that Non-modifiable personal factors (age, sex, genetic) significantly contribute to the development of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State. It is also in line with the findings of[17]. They reviewed that a large-scale inter heart study has observed that all these Personal factors, age, sex, genetic, were consistently adverse in all individuals in the development of coronary heart disease.

Hypothesis II

Modifiable personal factors (physical inactivity, alcoholism, and poor diet) will not jointly contribute to the development of heart diseases among non-academic staff of Higher Institution in Abeokuta, Ogun State.

Table 5.9.2: Regression Summary of Relationship between Modifiable Personal Factors (physical inactivity, alcoholism, and poor diet)

R= 0.183 **R Square= 0.034** **Adjusted R Square= 0.031**						
Model	**Sum of Squares**	**Df**	**Mean square**	**F**	**Sig.**	**Remark**
Regression	804.438	3	268.146	11.511	P<0.05	S*
Residual	23201.526	996	23.295			
Total	**24005.964**	**999**				

$F_{,(3/996)}$=11.511, P< .05. Significant at 0.05 level

Table 5.9.2 shows the Multiple Regression Correlation Coefficient (R), indicating the relationship between modifiable personal factors (physical inactivity, alcoholism and poor diet) on the development of coronary diseases was 0.183. This implies that there was relationship between modifiable personal factors (physical inactivity, alcoholism, and poor diet) on the developments of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State. R square is equal to 0.034 while adjusted R square is equal to 0.031. Therefore, modifiable personal factors (physical inactivity, alcoholism and poor diet) contributed 3.4 percent to variance on the development of coronary diseases. Further verification to test the signify-cance of the relationship using Regression ANOVA produced $F_{,(3/996)}$ =11.511, P< .05. Since, P value was less than 0.05 alpha levels, research hypothesis two was therefore rejected. Therefore, the result showed that Modifiable personal factors (physical inactivity, alcoholism, and poor diet) were jointly significantly contributed to the developments of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State.

Hypothesis III Environmental factors (work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria) will not jointly contribute to the development of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State.

Table 5.9.3: Regression Summary of Relationship between Environmental Factors: Work Environment, Inaccessibility of Recreational Facilities, Inavailability of High Quality Cafeteria

R= 0.191 **R Square= 0.037** **Adjusted R Square= 0.034**						
Model	Sum of Squares	Df	Mean square	F	Sig.	Remark
Regression	879.356	3	293.119	12.624	P<0.05	S*
Residual	23126.608	996	23.219			
Total	**24005.964**	**999**				

$F_{(3/996)}$=12.624, P< .05. Significant at 0.05 level

Table 5.9.3 shows the Multiple Regression Correlation Coefficient (R), indicating the relationship between environmental factors (work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria) on the development of coronary diseases was 0.191. This implies that there was relationship between environmental factors (work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria) on the developments of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State. R square is equal to 0.037 while adjusted R square is equal to 0.034. Therefore, Environmental factors (work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria) contributed 3.7 percent to variance on the development of heart coronary diseases.

Further verification to test the significance of the relationship using Regression ANOVA produced $F_{(3/996)}$ =12.624, P< .05. Since P value was less than 0.05 alpha levels, research hypothesis three was therefore rejected. The result showed that environmental factors (work environment, inaccessibility of recreational facilities, inavailability of high quality cafeteria) were jointly significantly contributed to the developments of heart diseases among non-academic staff of Higher Institution in Abeokuta, Ogun State.

Hypothesis IV

There will be no significant relative contribution of (age, sex, genetic, physical inactivity, alcoholism and poor diet, work environment, inaccessibility of recreational facilities, in-availability of high quality cafeteria) on development of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State.

Table 5.9.4: Regression Summary of Relationship between Environmental Factors Age, Sex, Genetic, Physical Inactivity, Alcoholism, and Poor Diet, Work Environment, Inaccessibility of Recreational Facilities, in-availability of High Quality Cafeteria

R= 0.248 **R Square= 0.061** **Adjusted R Square= 0.053**						
Model	Sum of Squares	Df	Mean square	F	Sig.	Remark
Regression	1475.517	9	163.946	7.204	P<0.05	S*
Residual	22530.447	990	22.758			
Total	24005.964	999				

$F_{(9/990)}$=7.204, P< .05. Significant at 0.05 level

Table 5.9.4 shows the Multiple Regression Correlation Coefficient (R), indicating the relationship between (age, sex, genetic, physical inactivity, alcoholism, and poor diet, work environment, inaccessibility of recreational facilities, in-availability of high quality cafeteria) on the development of coronary diseases was 0.248. This implies that there was relationship between age, sex, genetic, physical inactivity, alcoholism and poor diet, work environment, inaccessibility of recreational facilities, in-availability of high quality cafeteria on the developments of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State. R square is equal to 0.061 while adjusted R square is equal to 0.053. Therefore, age, sex, genetic, physical inactivity, alcoholism and poor diet, work environment, inaccessibility of recreational facilities, in-availability of high quality cafeteria contributed 6.1 percent to variance on the development of heart coronary diseases.

Further verification to test the significance of the relationship using Regression ANOVA produced $F_{*(9/990)} = 7.204$, $P < .05$. Since P value was less than 0.05 alpha levels, research hypothesis four was therefore rejected. The result showed that age, sex, genetic, physical inactivity, alcoholism and poor diet, work environment, inaccessibility of recreational facilities, in-availability of high quality cafeteria were relatively contributed to the developments of heart diseases among non-academic staff of higher institution in Abeokuta, Ogun State. Consequently, these findings supported that of WHO[13]. Which stated that inaccessibility of recreational facilities are major risk factors for health related problems like coronary heart diseases, obesity, hypertension, diabetes and stroke that are affecting workers. According to[13], the levels of physical inactivity are partly due to inaccessibility of recreational sports during leisure time increase sedentary behaviour during occupational activities as evident in several sector of Nigeria.

Discussion of Findings and Recommendation

Discussion of findings

The findings of this research revealed that non-modifiable factors (age, sex and genetic) and modifiable factors (physical inactivity, alcoholism and poor diet) has a joint contribution in the development of coronary heart disease. The findings is in line with the findings of Thanavaro[24] which stated that physical inactivity, poor diet and alcoholism plays major role in each of the twelve leading causes of death in chronic diseases such as heart disease, cancer and stroke, which are the major causes of death in developed and developing countries.[25] Also reported that work environment can increase the risk of obesity arising from job stress and work related fatigue which are linked to poor diet and reduced physical activity. It was also revealed that environmental factors (work environment, inaccessibility of recreational facilities, unavailability of high quality cafeterias contributed jointly to the development of coronary heart disease, this is in line with the findings of[16] which stated that unavailability of high quality cafeterias has given rise to eating from competitive foods which has been linked with poorer quality diets and increased risk of calories that obstruct the function of the arteries that supply blood to the heart in several studies. The result of this finding also corresponds with that of Sliwa et al.[12], reporting that epidemiology suggests a number of risk factors for coronary heart disease includes: age, gender, high blood pressure, high serum cholesterol levels, tobacco smoking, excessive alcohol consumption, genetic, obesity, lack of physical activity, psychosocial factors, diabetes mellitus and air pollution.

Recommendations

Based on the finding of this study, the following recommendations were made; there should be a national flag off campaign on the prevention of coronary heart disease, as it is one of the major killer of people, there should be a quarterly seminar for the non-academic staff of higher institution that will bring to their notice the knowledge of coronary heart diseases as well as the risk factors that predispose the condition, consequences of the condition and of course the preventive measures to be taken should be taken into consideration. It was recommended as well, that the higher institution authority at different levels should endeavour to monitor or organised a physical activity for this non-academic staff members that will be compelled and made mandatory for every member of non-academic staff both senior and junior. The authority should make physical activity a routine that will involve specialist in the aspect of physical activities, to coordinate such activity, at least once in a week. Moreso, the institutions should endeavour to provide a quality cafeteria where the food plans will be handled strictly by nutritionist that can monitor the food being serve to different age groups. Recreational facilities should be provided and be located in strategic areas where every staff will be motivated and have access to utilize it.

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