



# IJFANS

International Journal of Food  
And Nutritional Sciences

Volume 2, Issue 3, Jul-Sep-2013, [www.ijfans.com](http://www.ijfans.com)

e-ISSN: 2320-7876



**Official Journal of IIFANS**

*Research Paper*

*Open Access*

## **LIFESTYLE, DIETARY PATTERN, NUTRITION AND HEALTH CONDITION OF ELDERLY RETIREES RESIDENCE IN ABEOKUTA, NIGERIA**

**Olayiwola IO<sup>\*</sup>, Uthman-Akinhanmi Jumoke and Onabanjo OO**

Department of Nutrition and Dietetics, Federal University of Agriculture Abeokuta Nigeria

\*Corresponding Author: [ibisumbo@yahoo.com](mailto:ibisumbo@yahoo.com)

### **ABSTRACT**

Objective of this study assessed the usual daily activities, dietary pattern and health conditions of elderly retired civil servants residing in Abeokuta, Ogun State, Nigeria. There was a random sampling of two hundred retirees who had spent at least a minimum of ten years in active service for the government and were 60 years and over. Information was collected by semi structured questionnaire on lifestyle, diet and health condition. Body Mass Index (BMI) was calculated to determine nutritional status. The data analysis was by frequency, percentages and other inferential statistics. Age distribution revealed that most were 70-79 years old with at least secondary school education (70%). Lifestyle showed that 58% were in daily activities such as gardening and walking. Majority (66%) have an average daytime rest of 6 hours or more. Daily consumption of alcohol was relatively low 2.2% and 74% had never smoked. Report on good food habit was from 47%; majority (66%) eat thrice daily and 40% were on medications 60% complained of insomnia at night. BMI was normal for most respondents. 58% of the studied population had normal blood pressure of systolic and diastolic. There was a significant relationship between BMI and blood pressure and a significant negative correlation between age and BMI ( $p < 0.05$ ) as well as age and average night rest ( $r = -0.306; p < 0.05$ ). There were positive correlation between age and average daytime relaxation ( $r = 0.622; p < 0.05$ ). The study concludes that most of the elderly have normal nutritional status. About half of the elderly on medication, ate thrice daily and sedentary lifestyle. Physical exercises are encouraged on regularly basis for optimal health among the retirees.

**Keywords:** Health, Dietary Pattern, Retirees, Activity, Nigeria.

### **INTRODUCTION**

Retirement as conceived by Oniye (2001) is a complex process demanding serious planning. Thus, impression people have of retirement is a function of their understanding of what it connotes. However for the purpose of this study retirement is defined from the vocational point of view, as an indicator of the concluding stage of the occupational cycle at which certain facts, vocational and experiential achievements are expected of the retirees (Oniye (2001). In Nigeria the civil service scheme, a typical retiree is an elderly because of the attainment of minimum age of 60 year. At the elderly stage of life or in retirement it is expected that most will be healthy living an independent lifestyle. However this is not observed in most retiree's elderly. The past life of poor dietary habits frailty and illnesses has led some into poor health and malnutrition. In Nigeria and even in Africa very little attention has been given to elderly despite the increase and demographic shift that is occurring in Africa. A look at the statistics from all around the world attests to the fact that the population of the older people is increasing. Nigeria with the largest population in Africa and the

tenth largest population in the world, constitute 6% of the entire world population of 60 years, and above (United Nations, 1999), with life expectancy to rise to 64 years of age by 2025 (WHO, 1998) at the time of ageing.

This period of ageing requires proper care and nutrition (Asonibare and Oniye, 2008, NPC, 2006 and Martinez *et.al.*, 2011), in Nigeria, no provision for elderly nutritional needs by governments and families. Most people consider the elderly as a problem and so do not allow them the necessary care and nutrition. Furthermore, the overwhelming majority of retirees in Nigeria (>90%) aged  $\geq 60$  years were still in the labour force, working to produce goods and services that contribute to national income despite their negligence in the health and nutrition policy. Many retirees from government who had attained the age of 60 years are still working in Africa due to the poor pension scheme under inflation (NPC, 2006). This poor socioeconomic environment affects the living standard of most elderly. In the national planning the lifestyle of elderly in Nigeria is yet to gain attention of policy makers.

The challenge lies in the fact that ageing is a silent process, whose consequences are difficult to predict. Also, it is a new process in developing societies including Nigeria, for which there is no historical antecedent. As the experience of developed countries has succinctly indicated in this regard, despite an ageing process that has occurred over many years, adjustment to the challenges posed by population ageing has not been smooth. Given that large shifts in age structure are being compressed into a relatively short period in developing countries, these countries will take less time than the developed countries to adapt to the problems posed by the changing age structure (NPC, 2006 and Martinez *et.al.*, 2011). Rapid changes in age structure therefore, may be more difficult for societies in developing countries to adjust than changes that occur over a longer period of time. Consequently, the speed of population ageing has important implications for government policies, such as health care, pension schemes and economic growth. In order to deal adequately with these issues, and to prevent elderly retirees from becoming major economic, social and political problems, it is critical to have comprehensive and timely data for informed and evidence-based policies and programmes. Complete, accurate and up to date data will help to monitor the changing needs of the elderly retiree as well as the effects of policies. This type of information will be part of data base in the processes accompanying population ageing elderly retirees and their lifestyle (NPC, 2006 and Martinez *et.al.*, 2011). It is necessary to assess the current situation of retirees in Nigeria. Consequently the study is to evaluate the dietary pattern health and lifestyle of the retired government workers residing in Abeokuta capital town of Ogun State in Southwest Nigeria.

## MATERIALS AND METHODS

### DESIGN SETTING AND SAMPLING FRAME

The study was in Abeokuta the state capital of Ogun state Nigeria.

### SAMPLE AND SAMPLING TECHNIQUES

Yaro Yamane Formula [7] was used to draw the sample for the descriptive survey research. This formula reduces the standard error that would have occurred. That is every subject has an equal chance of selection as this was at 0.05% level of significance. The sample drawn is adequate to represent the entire population based on Yaro Yamane formula: The total population of retirees in Ogun state Nigeria was 600 out of which 30% (200) were randomly selected from the register of the retirees after detailed explanation respondent gave an informed consent. Total number that completed the study was 185 retirees.

### INCLUSION CRITERIA

All participants must be at least 60 years old and have worked for government and lived in Abeokuta the capital town of Ogun state, in Nigeria.

## ETHICAL PROCEDURE

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving human subjects. It was approved by the Ethical Review Committee of the Federal University of Agriculture Abeokuta, Nutrition and Dietetics Department. Informed verbal consent was obtained from all subject with witness and formally recorded.

## DATA COLLECTION

By means of a structured questionnaire, (interviewer administered) there was data collection on personal, socio-economic lifestyle, dietary and activity pattern plus health condition. There were anthropometric measurements of weight, height, and mid-upper arm circumference. Measurement of mid Upper Arm Circumference was in a standing position without sleeves; Body weight was without shoes and with light clothes. Height was measured in a standing pose with bare foot and no cap or headgear. There was a 24 hour diet recall, and food frequency questionnaire to document food consumption pattern and nutrient intakes. Food intake were quantified and converted to nutrients by means of food composition tables and TDA soft ware (Total Dietary Analysis). Nutrient intake was compared with Dietary Reference Intake DRI.

The blood pressure at three consecutive intervals after the subject had taken the rest for 10 min, and the average to calculate systolic and diastolic blood pressure. Blood pressure greater than 160/90mmHg was classified as high. Names (children, spouse, and parents), dates (birthdays, weddings) and addresses were to test for memory loss.

## RESULTS AND DISCUSSION

Table 1 presented the socio demography and activity pattern of the studied population. Age distribution revealed that majority (67%) were within age 70-79 years, 62% were males and 38% female. 85.1% have marital status with 10% widowed. Educational achievements showed that many have at least secondary or college (>70%) certificates. Lifestyle is such that retirees are on bed after 10 pm at night (72%) and many wake up between 5-7am in the morning. 2 out of 3 complained of insomnia at night. 34% were members of recreation/sports clubs. More than half was conscious of physical exercise for a healthy life (57%).

**Table1-Socio-demographic characteristics and Activity Pattern of the Study Population**

Variables	Frequency	Percentages
<b>Age</b>		
60-69	42	22.7
70-79	124	67.0
80-89	19	10.3
<b>Gender</b>		
Male	115	62
Female	70	38
<b>Marital status</b>		

Separated	2	1.1
Divorced	6	3.2
Widowed	19	10.3
Married	158	85.1
<b>Educational background</b>		
Non-formal education	23	12.4
Secondary/college	66	35.7
Diploma certificate	64	34.6
HND/BSc/MSc/PhD	32	17.3
Recreational activity away from home		
Yes	63	34.0
No	122	66.0
<b>Regular sports/exercises</b>	117	63
<b>Exercise score</b>		
Inactive (sitted most days)	9	4.9
Inactive (light house works)	23	12.4
Active (walks, gardens)	98	53.0
Active (sports, farming)	49	26.5
Very active (heavy work)	6	3.2
<b>Average daytime rest</b>		
2-3 hours	6	3.2
4-5 hours	56	30.3
≥6 hours	123	66.5
On bed at 10pm	133	72

In Table 2, there was an overview of the retiree's socioeconomic status. The major sources of income were pension and children cash gifts (28.5%). About 30-50% of incomes were on food budget. The dietary pattern divulge the fact that majority ate thrice daily (66%) while 54% avoid certain foods. The fruit and vegetable consumption is low as more than half ate fresh fruits and fresh vegetables less than once in a month or occasionally (Table 3). 7.02% of the studied population takes alcohol with 2.7% consuming alcohol daily. About half were on vitamin and mineral supplements. The mean BMI was 23.65kg/m<sup>2</sup> with standard deviation of 3-4. On further analysis BMI classification revealed that 41.2% were within normal range, 47% were overweight, 7% were underweight and 4.8% were obese. The calorie intake ranged from 1429 – 1445 kcal/d. 31.4% met the recommended daily allowance for phosphorous, 3.2% met the RDA for zinc for the older people.

The health situation showed 60% are on medication while 45% of the health problem affects feeding. The eye problem and poor eye sight was by 15.1%, and 20% had dental problems, about 70% have no need of health aids either for hearing, sight or walking (Table 4). Of the 60% on medication, 69% combined both local herbs and orthodox medicines for

health reasons. All the subjects received treatment for malaria, and arthritis within the past one year. The elderly used vitamins and mineral supplements prescribed by doctors and others. 91% remembered dates, addresses and names while 9% may be suffering from mild memory loss.

Elderly on physical exercise were 63% (table tennis, squash); these were members of a recreational club. Other lifestyle observed were 60% sleep between 10pm and 5-7am. 1 out of 3 used to smoke but had stopped following doctors' advice. Daily consumption of fruits and vegetables are among 30%, those on weekly are 11.5% and those on occasional were 59%. Results of correlation of variables revealed that there were positive correlation between age and average daytime rest ( $P < 0.05$ ); age and average night rest ( $P < 0.05$ ). Furthermore Age correlates regular exercises ( $r = 0.325$ ;  $p < 0.05$ ) and medication ( $r = 0.401$ ;  $p < 0.01$ ) but inversely with Body Mass Index (BMI) ( $r = -0.647$ ;  $p < 0.05$ ). The blood pressure was normal for more than half but increases with BMI ( $r = 0.327$ ;  $p < 0.01$ ). Good lifestyle, physical exercises are extremely valuable in older persons as this leads to prevention and reduction in the incidence of cardiovascular diseases (Talbot *et.al.*, 2002 and Van *et.al.*, 2002). Exercise in later life, even beyond age 90 years can still increase strength and reduce the likelihood of a fall, an important risk for hip fracture (NIH, 2010). Hour spent to rest after exercise is an important aspect of health. Older people sleep less and may be unable to sleep throughout the night due to decreased need for sleep (Lynn Wallace, 2013).

Apart from exercise, is food habit in consideration of lifestyle. This study reveals many as a non smoker and non alcoholic. Alcohol consumption was associated with high blood pressure (Lynn Wallace, 2013), also may be unfavourably associated with the frequency of acute respiratory infections in apparently healthy elderly (Van *et.al.*, 2007). Positive emotions may directly affect health by altering the chemical balance of the body (BBC news), and a positive view on ageing affects life expectancy and longevity (Joanna, 2008). More than half of the

**Table 2: Socioeconomic Situation of the Retirees**

Caregiver at home	Frequency	Percentages
Confidant only	29	14.5
Caregivers only	37	18.5
Confidant and caregiver	113	56.5
<b>Phone Usage</b>		
Rarely	14	7.0
Monthly	52	26.0
Weekly	99	49.5
Daily	35	17.5
<b>Source of income.</b>		
Pension only	76	38.0
Children and pension	57	28.5
Business/Contracts and pension	32	16.0
Farming and pension	17	8.5
Pension, Business and Children	9	4.5

Pension, farming and Children	9	4.5
<b>Monthly budget on food from income</b>		
10-20%	3	1.5
21-30%	11	5.5
31-40%	75	37.5
41-50%	76	38.0
≥51%	35	17.5

**Table 3: Dietary Pattern, food habit and Mean Calorie intake of the Elderly Retirees**

Pattern	Frequency	Percentage
<b>Eat alone</b>		
Yes	83	45.
No	102	55.
<b>Number of Meals per day</b>		
Once	1	0.5
Twice	63	34.0
Thrice	121	65.5
<b>Recent changes in food pattern within the past year</b>		
Yes	40	21.5
No	145	78.5
<b>Best food when young</b>		
Tubers and cereal grains based dishes	109	59.0
Legumes and animal protein based dishes	65	35.0
Fruits and vegetables	3	1.5
None	8	4.5
<b>Fruits and vegetable consumption</b>		
Daily	55	29.5
Atleast once a week	21	11.5
Occasionally	109	59.0
<b>Food avoidance</b>		
Yes	99	53.5
No	86	46.5
<b>Reason for food avoidance</b>		
Health	43	23.0
Religion/culture	54	29.0
Odour/color/taste	3	1.5
	99	53.5
<b>Consumption of industrially processed foods</b>		
Never	88	47.5
Daily	12	6.5
2-3 times weekly	61	33.0
4-5 times weekly	24	13.0

<b>Self rate of eating habits over a year.</b>		
Good	86	46.5
Fair	91	49.0
Poor	8	4.5
<b>Alcohol</b>		
Yes	13	7.02
No	172	92.88
<b>Vitamins and mineral supplements</b>	96	52
<b>Mean calorie intake</b>	185	1437±8.15KCal

**Table 3b: Elderly Retirees Anthropometry Measurements**

Height	Mean
Mean height for men	1.67±0.06m
Mean height for female	1.65±0.03m
Mean height for respondents	1.66±0.53m
<b>Weight</b>	
Mean weight for male	64.38±12.31kg
Mean weight female	65.01±9.7kg
Mean weight for respondents	65.12±11.634
<b>MUAC</b>	
Mean for male	28.87±4.31
Mean weight female	27.91±3.02
Mean weight for respondents	28.54±3.907
<b>Nutritional status classification</b>	
Normal	41.2%
Overweight	47%
Obese 1	4.8%
Under weight	7%

**Table 4: Disability and Health Situation of Retirees**

Variables*	Frequency	Percentage
<b>Health aids</b>		
Glasses only	28	15.1
Hearing aid only	2	1.1
Cane and glasses	18	9.7
Glasses, hearing aid and walker	2	1.1
Glasses and hearing aid	6	3.2
None	129	69.7
<b>Treatment received within the last 1 year</b>		
Malaria	185	100
Diabetes	1	0.5
High blood pressure	86	46.5
Circulatory problems	2	1.1
Optical	24	7.6
Constipation	42	22.7
Typhoid	2	1.1
More than one of the above	23	12.4
None	3	1.6
<b>Dental Problem</b>	37	20
<b>Good memory</b>	168	91
<b>Blood pressure</b>		

150/90-160/90	108	58.4
<160/90	6	3.2
>160/90	71	38.4
<b>Medication</b>		
Yes	86	46.5
No	99	54.5
<b>Self rate of overall health</b>		
Poor	4	2.2
Fair	54	29.2
Good	96	51.9
Excellent	31	16.8

\*No Total sum because of multiple responses

study population was on medication, and all were taking dietary supplements. A study on older women from a city also found that half of the studied population was using dietary supplements (Marshall *et.al.*, 20004). A study in china found that 20% of a group of 261 older people were using dietary supplements (China daily, 2005). This study on older people in Guangzhou, China also establishes that 47% had high blood pressure (Strandgaard, 1994) and high blood pressure is a risk factor for

dementia and cognitive deterioration in the older person (Chwojnowska *et.al.*, 1993) which is similar to the current findings.

The observation on eating thrice daily is similar to a study in Warsaw found that 50% elderly had 3 meals a day and 41% had at least 4 meals a day (Administrative Committee on Coordination/ Sub Committee on Nutrition (1999). Daily consumption of fruits and vegetables were low among the study population. This habit can reduce the dietary fiber. Dietary fiber is extremely beneficial because it helps constipation, haemorrhoids and diverticulitis; also associated with lower cholesterol levels and a reduced risk of heart disease and cancer (Pereira, 2004 and Carguilla and Mustad, 1997). The intake of mineral and vitamins supplements will help to boost essentials micronutrient for elderly who are beneficial for healthy living (NIH, 2010 and Udoh, 2005). The intake of vitamin and mineral supplement is common among elderly in Nigeria (Aboaba, 2004). Also the nutritional status of BMI inversely correlates with age are similar to most elderly in Nigeria (Aboaba, 2004) and other Africa countries (Administrative Committee on Coordination/ Sub Committee on Nutrition (1999).

**Table 5- Correlations of Lifestyle, Nutrition and health of Elderly Retirees**

Variables	age	education	Food budget	medication	Average night rest	Regular exercise	Average daytime rest	BMI	Blood pressure
Age	1.00	0.048	0.006	-0.401**	-0.306**	0.325**	0.622**	-0.646*	0.105
education	0.048	1.00	0.527**	-0.072	-0.033	-0.070	0.001	0.086	0.018
Food budget	0.006	0.527**	1.00	-0.052	-0.056	-0.108	-0.010	0.070	-0.093
Medication	-0.401**	-0.072	-0.052	1.00	0.075	-0.277**	0.330**	0.073	-0.121
Average daytime rest	-0.306**	-0.033	-0.056	0.075	1.00	0.072	0.051	0.102	0.036
Regular exercise	0.325**	-0.070	-0.108	-0.277**	0.072	1.00	-0.278**	-0.002	-0.113
Average daytime rest	-0.622**	0.001	0.010	0.330**	0.051	-0.278**	1.00	0.078	-0.105
BMI	-0.464*	0.086	0.070	0.073	0.102	-0.002	0.078	1.00	0.327**
Blood pressure	0.105	0.018	-0.093	-0.121	0.036	-0.113	-0.105	-0.327**	1.00

P<0.05\* P<0.01\*\*

## CONCLUSION

In this study, some retirees are on active exercise with self reported good health in comparison to others. About half of the elderly is of good dietary pattern and supplements and nutritional status. Mean energy intake is below the dietary reference value (DRI). Based on the observation in this study, the following recommendations are made: The policy makers should put in place post-retirement packages capable of making lives of retirees more comfortable. This is especially crucial in the area of social finance, diet and medical care, bearing in mind that poor health and need for health care and nutrition are important to retirees. Physical exercises should be encouraged

among the retirees as most had the knowledge that it is invaluable to proper health. Dietary pattern to increase in daily consumption of fruits and vegetables. Furthermore retirees should be careful on their lifestyle to avoid habits that can increase their bills and ensure a stable standard of living for the family.

## REFERENCES

- Oniye, O.A., (2001). Problem associated with retirement and implications for productive adult life. *Nigeria Journal of Gender and development*. 2 (1) 55-64.

- United Nations (1999). World population prospects. New York. United Nations.
- World Health Organization. 1998. Population ageing- a public challenge. Fact sheet No.135. Geneva.
- Asonibare JB and Oniye A O. 2008. Retirement and retirement counseling: Issues and challenges. African Journal of Education and Developmental Studies (AJEDS).5(2).
- National Population Commission/Macro (2006): Nigeria Population. The Elderly. Abuja, Nigeria. Chapters 5 and 7. .
- Martinez-Tome, M.J, Rodriguez, A, Jimenez, A.M et al. 2011. Food habits and nutritional status of elderly people living in Spanish city.
- Talbot, L, MMorrel, C and Fleg, J.L. 2002. Comparison of cardio respiratory fitness versus leisure time physical activity as predictions of coronary events in men aged ≥65years. Am J Card. 89:1187-1192.
- Van Der Bij, A.K, Laurent, M.G.H and Wensing, M. 2002. Effectiveness of physical activity interventions for older adults. Am J Prev Med 22: 210-233.
- National Institute of Health. 2000. Osteoporosis prevention, diagnosis and therapy. NIH Consensus statement. 17(1):1-36.
- 10 Lynn Wallace. 2013. Reasons for high blood pressure in the elderly. eHow.com facts. Retrieved Jan, [Http://www.eHow.com/facts\\_4826915\\_normal-blood-pressure-elderly.html](http://www.eHow.com/facts_4826915_normal-blood-pressure-elderly.html)
- Van der Horstgraaf, J.M, Terpstra, J.S, Kok, F.J and Schouten, E.G. Alcohol, smoking and physical exercise related to respiratory infections in elderly people. J Nutr Health. 2007. Jan-Feb; 11 (1): 80-85.
- BBC News. Positive attitude delays ageing. LLast updated Sept 12 2004. BBC MMIX. Stibich, M. Think positive about ageing and live longer. Updated April 26. About.com Medical Review Board. [Http://www.longevity.about.co./cod/mental\\_fitness/p/pc.htm](http://www.longevity.about.co./cod/mental_fitness/p/pc.htm).
- Joanna Wyka, Jadwiga Biernat. Nutritional knowledge and eating habits of elderly women from the big city environment. Borgis-New medicine 2008; 1, p.20-24.
- Marshall, T.A, Stumbo, P.J, Warren J.J and Xie, X.J. 2001, Inadequate nutrient intakes are common and are associated with low diet variety in a rural community dwelling elderly. J Nutr, 131 (8), 2192-2196.
- China Daily. Bad lifestyles sicken Guangzhou's elderly. May 12, 2005. China Internet Information Centre online.
- Strandgaard, S and Paulson, O.B (1994). Cerebrovascular consequences of hypertension, Lancet, 344, 519-521.
- Chwojnowska, Z, Charzewska, J, Rogalsk-Nedwiedz, M et al. 1993. Assessment of food and nutrient consumption by men and women aged 70 years from Warsaw. *Zywnie Czlowieka. Metabolism*, 20, (3), 189-200.
- Administrative Committee on Coordination/ Sub Committee on Nutrition (1999) Nutrition and healthy ageing. SCN News 19. ACCN/SCN, Geneva.
- Pereira, M.A, O'Reily, E Augustsson, K et al. (2004). Dietary fiber and risk of coronary heart disease, Arch Intern Med 164:370-376./ Article/PubMed/
- Carguilla, A.W and Mustad, V.A. (1997) Effects of dietary fat and fatty acids on coronary artery disease risk and total lipoprotein in cholesterol concentrations: epidemiologic studies. Am J Clin Nutr. 65(suppl):159-160.
- Carguilla, A.W and Mustad, V.A. (1997) Effects of dietary fat and fatty acids on coronary artery disease risk and total lipoprotein in cholesterol concentrations: epidemiologic studies. Am J Clin Nutr. 65(suppl):159-160.
- Udoh, Florence. 2005. Common health needs of elderly people. New York.
- Aboaba IO 2004. Assessment of nutritional Status of elderly in Ogun state. Ph D Thesis, University of Ibadan. Ibadan. Nigeria.