The Prevalence of Hypokinetic Disorders Among Workers in Tertiary Institutions in Ekiti State, Nigeria.

By J.A Adegun,and E.P. Konwea

Introduction

Physical activity was enjoyed throughout everyday prehistoric life as an integral component of religious, social and cultural expression. Food supplies for the most part were plentiful, allowing ample time for both rest and recreational physical endeavours (U.S Department of Health and Human Services, 1996). Historically speaking, the majority of the populace in Nigeria were farmers, moving from home to farmlands near and far. People were used to hard work, intense and strenuous exertion. Life depended on rigorous physical activity both in occupation and recreation. But the advent of western education that resulted to white collar jobs and pleasure seeking life had drastically reduced exposure to physical activity.

The public servants are the set of people affected by the industrial revolution and urbanization which resulted to sedentarism and associated problems. Hypokinetic disorders are the resultant effect of the decrease in physical activity. McArdle, Kalch and Kalch (2007) reported that inactivity alone resulted in a constellation of problems and conditions eventually leading to premature death. They further noted that sedentary death syndrome (SeDS) relates to high blood cholesterol, high blood glucose, hypertension, myocardial ischemia, arrhythmias, congestive heart failure and obesity.

There is overwhelming scientific evidence highlighting the health, social and psychological benefits associated with an active lifestyle. However, physical activity remains the most underutilized low cost health resource in the world (Travis, 2003). Increased exposure to western lifestyle and eating habits which are characteristics of urban African environment and decreased participation in physical activity are contributing factors to increase in health problems. According to Brundland, (2003), there has been a shift away from traditional diets to high density diets with high levels of fats, sugar, and salts. Although under nutrition and food shortages are still major problems in Africa, Nigeria in particular, diet related chronic diseases are on the increase.

A sedentary lifestyle has been linked to development of coronary artery diseases of adulthood that are major causes of death and disability. (Nelson, Goldberg and Harris, 1992;

Riddoch, Savage, Murphy, Cran and Borehan, 1991). Modern technology has also lessened the physical demands of everyday activities like cleaning the house, washing clothes, mowing the lawn and traveling to work. As a result, more time is available to pursue leisure activities. The unfortunate fact, however, is that many individuals pursue sedentary activities. What would have once required an hour of physical work can now be accomplished in just a few seconds by pushing a button or setting a dial. Hence Physical inactivity has lead to a rise in hypokinetic diseases. The prefix hypo means "lack of" and kinetic refers to movement. Although the human body is design for movement and strenuous physical activity, exercise is not part of the average lifestyle of most Nigerians who have also not develop the culture of attaining fitness through regular exercise (Akindutire, 1994). One cannot expect the human body to function optimally and to remain healthy for extended periods if the body is abused or not use as intended (Bouchard and Depres, 1995).

Individuals who do not exercise regularly have a greater risk of developing hypo-kinetic diseases, such as coronary heart disease, hypertension, cancer, obesity muscular skeletal disorder (Washborn and Figoni, 1998). Although exercise is only one important factor associate with reduced risk of hypokinetic disease and condition, nutrition, smoking, lifestyle, hereditary, stress, age and environment cannot be overlooked as important risk factors. However, Corbin & Lindsey, Heyward, (2002) reported that scientist and health fitness professionals affirm that physical activity is the best defence against many diseases and disorders. Studies have shown that physically active people have lower incidence of myocardial infraction and mortality from coronary heart disease (CHD) and tend to develop CHD at a later age compared to other sedentary counterpart (Berlin and Colditz 1990). An inverse relationship between blood pressure and physical activity level in men and women were also reported (Hagberg, 1990, Reaven, Barrett- Connor, and Edelstein 19991). Physical activity also reduces ones risk of developing non-insulin, dependent diabetes mellitus through its association with weight loss (Wells, 1996) Akindutire, (1994) reported a high incidence of hypokinetic condition amongst secondary school Administrators. There was indication of malaise , feeling too weak to get up in the morning (57.27%), manifestation of profused breathing with little physical exercise among respondents. Studies are somehow scarce in this important area of life of people.

Regular physical activity is linked to enhance health and to reduce chronic disorders of negative physical activity lifestyle. The benefits of physical activity include helping to build and

maintain healthy bones and muscles, control body weight, reduce body fat, reduce feeling of depression and anxiety and promote psychological wellbeing. However most people are not inclined to participation in exercises. Workers in tertiary institution spend eight hours of their day on the job, most spend considerable part of heir time sitting down with little physical movement. The staff in tertiary Institutions are sedentary in nature and are being exposed to pressure, tension, union problems and others psychophysiological combatment due to inadequate facilities and over populated institutions. So it is highly relevant to study the prevalence of these sedentary life disorders among them in order for recommendation to be made for checkmating these diseases. This study therefore examines the prevalence of hypokinetic disorder among workers in the tertiary institution in Ekiti state, Nigeria. It also examined difference in the prevalence based on age, gender, job description and job status as well as the implications on the health of individuals.

Research method

The study population consists of members of staff of the three tertiary institutions in Ekiti state. Proportionate sampling technique was used to select the respondents based on sex (male or female), job designation (academic staff or non academic staff) and job status (senior staff or junior staff). A total of 490 responses were used for the study. (Composition of sample presented in table 1)

Instrument: The Physical Activity Questionnaire (PAQ) adapted from Corbin and Lindsey (1991) and Akindutire (1994) was used for data collection. The questionnaire had two sections, section A consists of items on demographic data of respondents while section B consists of 19 items used to elicit data on nature of hypokinetic disorder experienced by the respondents. A three point rating scale of Yes, No, and Not sure was used. A test-re-test reliability using twenty respondents gave a reliability coefficient of 0.79 which was considered high enough.

Data collection and Analysis:

The instrument was administered personally through a team of research assistants. Out of 650 questionnaire distributed a total of 490 were completed and returned. Reflecting a response return rate of 75 %.

RESULTS

Table 1 – Analysis of sampled data on demographic characteristics of respondents.

Sex Respondent		**AGE**		**Job Description**		**Job Status**	
Sex	f (%)	AGE	f (%)	Designation	No (%)	Status	f (%)
Male	256 (52.2)	25-39	252 (51.4)	Academic staff	257 (52.4)	Senior Staff	242 (49.4)
Female	234 (47.8)	40 and above	238 (48.6)	Non Academic staff	233 (47.6)	Junior Staff	248 (50.6)
Total	490 (100.0)		490 (100.0)		490 (100.0)		490 (100.0)

Table 2- Percentage of hypokinetic disorders reported by respondents

Type of hypokinetic disorder	**Yes (%)**	**No**	**Not sure %**
Experiencing Chest pain	385 (78.6)	59 (12.0)	46 (9.4)
Regular back pain	254 (51.8)	127 (25.9)	109 (22.2)
Too fat and heavy or overweight	155 (31.6)	319 (65.1)	16 (3.3)
Having traumatic emotional experience	63 (12.9)	59 (12.0)	368 (75.1)
Having persistent body weakness	300 (61.2)	109 (22.2)	81 (16.5)
Having high blood pressure	105(21.4)	16 (3.3)	369 (75.3)
Tendency to have heart failure/heart attack	93 (19.0)	254 (51.8)	43 (29.2)
Experiencing feeling of uneasiness	178 (36.3)	249 (50.8)	63 (12.9)
Experiencing uneasy breathing (suffocation)	375 (76.5)	99 (20.2)	16 (3.3)
Breathing profusely with little physical activity	389 (79.4)	59 (12.0)	42 (8.6)
Having continuous/stomach pain (ulcer	135 (27.6)	250 (51.0)	105(21.4)
Experiencing drowsiness (sleeping always)	99 (20.2)	359 (73.3)	92 (6.5)
Having diabetes	101 (20.6)	330 (67.3)	59 (12.0)
Feeling too weak to get up in the morning	303 (61.8)	187 (38.2)	-
Feeling too dull (not lively)	289 (59.0)	201 (41.0)	-
Having pain in the eye (blur vision)	222 (45.3)	139 (28.4)	129 (26.3)
Having persistent headache	329 (67.1)	86 (17.6)	75 (15.3)
Feeling dizzy (most times)	262 (53.5)	165 (33.7)	63 (12.9)
Experiencing insomnia (inability to sleep)	257 (52.4)	131 (26.7)	102 (20.8)

Table 2 shows that the respondents generally indicated evidence of hypokinetic disorders. Three hundred and eighty five (78.6%) were experiencing chest pain, 51.8% indicated that they usually have back pain, 61.2% experienced persistent body weakness, 76.5% experience uneasy breathing, 79.4% breath profusely with little physical activity, 62.86% feel too weak to get up in the morning, 59.0% reports feeling too dull, 67.1%reports having persistent headache, 53.5% feel dizzy most times and 52.4% experiences insomnia

Table 3

Sex difference in the prevalence of Hypokinetic disorder/disability

Sex	N	X	SD	df	T value	Table t	p
Male	256	20.74	9.5	488	0.48	1.96	>0.05
Female	234	20.35	9.9				

Table 3 – revealed that calculated t (0.48) is less than table t (1.96), there is therefore no significant difference in the prevalence of hyporkinetic disorder between male and female respondents.

Table 4 – t-test on age differences in the prevalence of hypokinetic disorder/disability

Age	N	X	SD	df	T value	Table t	P
25-29	252	17.4	12.4	488	7.97	1.96	<0.05
40 and above	238	23.9	2.9				

Table 4: shows that calculated t (79.7) is greater than table t (1.96). therefore there is a significant difference between the two age groups and the prevalence of indicated hypokinectic disorder.

Table 5 – t-test on differences in the prevalence of Hypokinetic disorder based on job designation

Job designation	N	X	SD	df	T value	Table t	P
Academic staff	257	21.5	8.6	488	2,29	1.96	<0.05
Non – Academic staff	233	19.5	10.6				

Table 5: shows that calculated t (2.29) is greater than table t (1.96). Therefore there is a significant difference in the prevalence of hypokinetic disorder between academic and non-academic staff.

Table 6 – t-test on differences in the prevalence of Hypokinetic disorder based on job status

Job status	N	X	SD	df	T value		P
Senior staff	242	22.3	8.2	488	4.16	1.96	<0.05
Junior staff	248	18.7	10.5				

Table 6: revealed that t calculated (4.16) is greater that table t (1.96). The null hypothesis was therefore not accepted there is a significant difference in the prevalence of hypokinectic disorder between senior and junior staff.

Discussion

The findings from the study show that a high percentage of the respondents indicated evidence of each of the hypokinectics conditions cited in the study. This is not surprising since Akindutire (1994) affirmed that exercise is not part of the average lifestyle of most Nigerians and that they also have not developed the culture of attaining fitness through regular exercise. Bouchard and Depress, (1995) also confirmed that the human body cannot be expected to function optimally and to remain healthy for extended periods if it is abused or not used as intended.

These findings are similar to those of Corbin and Lindsey (1991) where the authors claimed that it is only an active lifestyle through regular physical fitness exercise that can reduce the early manifestation of such disabilities.

A major finding in the list of hypokinetic disorders was that about 75% of the respondents were not sure of the status of their blood pressure and if they have traumatic emotional experience. Adelowo and Amos (2007) confirmed that most Nigeria do not see the need for medical checkup until they fall sick. This could explain the reason why most of the respondents in this study stated that they were not sure if they had high blood pressure or not. It has been observed that

most Nigerians do not also want people to read or understand how they feel about issues related to their health and emotions until they are very sick. Generally, Hypokinetic disorders are highly associated with life style and the senior staff in tertiary institution in Nigeria. The disorders are indicators of unpromising health of the staff. There is tendency of having low productivity, incapacitation of subjects. The staff needs a lot of attention by individuals and the various governments. Because of the negative consequences of these needs for exposure of the subjects' to physical activity problems individuals and coperately.
Hockey (1996) also clearly emphasized that the sedentary way of life has had a negative effect on the human body and has been associated with hypokinetic diseases like hypertension, obesity, diabetes, lowback pain, osteoporosis and cardiovascular disease. These disorders are highly associated with inactivity among people of all ages.

The study also revealed that there is no difference between male and female respondents in the prevalence of reported hypokinetic disorders. This finding is different from that of Akindutire, (1994) where the female subjects had a slightly higher incidence of disability, however Corbin and Lindsey (1991) reported that some disabilities are common in adults especially in women because of long sedentary working hours. But the prevalence of regular substancial activity was somewhat higher among men than women. (US Department of Health and Human services 1996).

The findings show that there was a significant age difference in the prevalence of hypokinetic disabilities. This is not surprising because findings of Butler (1975), Klump (1975) and Bucher and Thaxton (1981) also indicated that decline in physical ability in man begins during the ages 36 to 64 years and that the older a person becomes the less he is able to adjust to physical and physiological stresses and the more susceptible to both hypokinetic and infectious diseases. Reddy and Reddy (2007) reported that people at old age home suffer from hypertension and stress but come to normal and expressed being stress free after exposure to simple walking and exercises.

It is very important to note that ageing can bring about degeneration in the body with the prevalence of degenerative diseases like the disorders reported in the results. However inactivity

that induce early onset of these diseases and the degree of severity can also occur. Physical activity definitely reduces the debilitating effects of these diseases in the body.
It was revealed that the prevalence of hypokinetic disorder among academic staff is higher than those of non academic staff.

Conclusion and Recommendation.

Based on the findings of this study it was concluded that there is the prevalence of varying degrees of hypokinetic disorders like chest pain,breathing profusely with little physical activity,uneasy breathing,persistent headache and body weakness,e.t.c. There is no difference in the prevalence of hypokinetic disorders between male and female respondents but a difference exist among the two age groups as those above 40 years reported a higher prevalence of the disorders. Academic staff also indicated a higher prevalence of the disorders than non academic staff and the senior staff indicated a higher prevalence than the junior staffs of the three tertiary institutions.
Based on the finding it was recommended that the staff of tertiary institutions should be encouraged to create time for recreational exercises this can be done by providing staff recreation centers both in the premises of the institutions, the staff quarters and close to places where the can be reached.

References

Adelowo R. & Amos (march18, 2007) risk of not going for medical check-up. *Sunday Punch* pg 15.

Akindutire, I.O. (1994) Incidence of hypo kinetic disabilities among school Administrators. *Osua Journal of Education* 1 (1) 76- 85

Akindutire, I.O. (1991). Physical fitness through a recreational approach for leadership personnel in Nigeria, *International Journal of Physical Education* xxvii (4) 30 - 36

Akindutire, I.O. (1992) Perceived influence of physical activity on aging process *Sports Science and medicine*, 1 (2) 133-138

Berlin, J. A., & Colditz, G. A. (1990) A meta-analysis of physical activity in the Prevention of coronary health disease. *American Journal of Epidemiology*

132: 612-628

Bouchard, C. and Depres, J.P (1995) Physical activity and health: atherosclerotic, Metabolic and hypertensive diseases. *Research Quarterly for Exercise and Sport*.66: 268-275

Brundland, G.H. (2003) Interacting with NGO's to reduce Cewonic disease risk. Notes prepared for DGNGO meeting. Statement WHO/7 16 May 2003, Geneva: WHO

Corbin, C.B. & Lindsey, R. (1991). Concepts of physical fitness, Dubuque, w.m.c. Brown Publishers, 7th edition.

Hagberg J.M (1990) Exercise, fitness and hypertension In C. Bouchard, R.J Shepherd, T. Stephen, J.R Sutton, and B.D. Mipherson, (eds-1) Exercise fitness and health; a consensus of current knowledge. Champaign, I.L Human Kinetics

Hockey R.V (1996) *Physical Fitness: the pathway to healthful living*. St Louis, Mosby –year book Inc.

McArdle, W.D, Karch, F.I & Karch V.L (2007) *Exercise physiology.* Baltimore, Lippincott Williams and Wilkins.

Nelson, M, Goldberg, B. & Harris, S. (1992) Fitness, activity and sport participation in the preschool child. Pediatrics 90 (6) 1002-1004

Reaven, P.D, Barett-connor, E., & Ederstein, S. (1991) Relation between leisure Time physical activity and blood pressure in older women. Circulation 83: 559-565

Reddy P.C and Reddy S.B (2007) Better Living through exercise. Proceedings of International University Sports Universiade Bangkok. 511-513

Reddy .P.C. and Reddy S.B. (2007) proceedings Universaide Bangkok International University Sports Conference.

Riddoch, C. Savage, J. Murphy N. , Cran, A. & Boreham, C (1991) longterm Health Implications of fitness and physical activity pattern. Archives of diseases in childhood 66: 1426-1433.

U.S. Department of Health and Human services (1996) physical Activity and Health. A report of the Surgeon General. Atlanta. International Medical Publishing.

Travil, A .L. (2003) Poverty, Urbanization, Physical inactivity and health in African Societies. Africa journal for

Wash burn, R.A. & Figoni, S.F. (1998). Physical activity and chronic cardiovascular

disease prevention in spiral cord injury – a comprehensive literature review. *Top Spiral cord injury Rehail*, 3 – 16-32.

Wells,C.L. (1996) Physical activity and women health. In C. Corbin and B. Pangrazi, eds, Physical activity and fitness Research digest. Series 2, no 5, 1-6.