
**PHYSICAL ACTIVITY LIFESTYLE PROFILE OF THE ACADEMIC STAFF OF COLLEGE OF EDUCATION,
AFAHA NSIT, AKWA IBOM STATE, NIGERIA**

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ABSTRACT

Participation in physical activity is beneficial to people of all ages. Yet, the majority of people are still physically inactive. This study is aimed at determining the physical activity lifestyle profile of the academic staff of the Akwa Ibom State College of Education (AKSCOE), Nigeria. Three research questions were raised for the study. Survey research design was adopted. The population consisted of 168 teaching staff of the college. A sample of 124 teaching staff was drawn for the study using purposive sampling technique. The "International Physical Activity Questionnaire (IPAQ)" short form in English version was adapted, validated for local suitability, and used for data collection in this study. Data from 124 completed copies of the adapted IPAQ were used for analysis. Frequencies and percentages were used for data analysis. Results showed that higher proportion of the teaching staff in all age brackets had low level of physical activity. Hundred per cent of those aged 60+ years were physically inactive. Equal proportion of female and male, as well as majority of the senior and junior academic staffs had low level of physical activity. It was recommended that the workplace physical activity and fitness programme should be developed for the teaching staff of AKSCOE, Afaha Nsit, Nigeria.

KEYWORDS: physical activity, Lifestyle and Profile.

Introduction

Regular participation in physical activity is beneficial to people of all ages as it promotes the general health and wellbeing of participants and prevents negative health outcomes. The World Health Organization (WHO, 2020) defined physical activity as any bodily movement produced by skeletal muscles that requires energy expenditure. It involves a broad range of exercises, as well as other forms of high-intensity activities undertaken while working, during leisure time, or playing sports. Exercise is operationally considered as a subset of physical activity that is planned, structured, and organised in various forms and performed moderately or vigorously with the sole aim of enhancing physical fitness. Empirical evidence upholds that physical activity, irrespective of form and intensity, can improve muscular strength and cardiovascular endurance, as well as physical, emotional and mental health (Cooper, 2010). It controls body weight, reduces anxiety, and encourages recovery from stress (Biddle et al., 2000). Shakey and Gaskell (2013) found that physical activity prevents or reduces the risk of non-communicable diseases such as hypertension, stroke, overweight, obesity, diabetes, osteoporosis, osteoarthritis, and metabolic syndrome. It improves the functions of all body

systems, increases years of life expectancy, reduces frailty and infirmity, and extends healthy days.

Every individual can benefit from regular physical activity, whether he/she participates in vigorous exercise (jogging, bicycling, swimming, walking up the stairs, sports like football, handball, and hockey, skipping rope, and gymnastics) or some type of moderate health-enhancing physical activity such as brisk walking, water aerobics, dancing, and hiking (Donaldson, 2009).

Despite these benefits, participation in physical activity is declining among people, including staff in all tiers of educational institutions worldwide (Hallal et al., 2012). In Iraq, for example, Agha and Al-Dabbagh (2010) reported a high level of physical inactivity and sedentary lifestyle among the teaching staff of primary, secondary and higher education institutions. In Nigeria, although there is no nationwide survey of the physical activity participation profile of people in the education sector, a few available studies indicated that academic staff (Eboh et al., 2007) in Nigerian higher institutions experienced health problems that occurred as a direct consequence of physical inactivity. Certain factors tend to be responsible for the trend in physical inactivity and sedentary lifestyle that is seemingly alarming among staff of higher institutions. According to Thomas (2019), modern technological advancement is virtually replacing man's physical activity and speedily rendering man inactive. The resultant effect of an inactive lifestyle is traceable to most cardiovascular health problems and non-communicable diseases prevailing today.

Lifestyle practice, in relation to physical activity, can be healthy or unhealthy. An unhealthy lifestyle can be perceived as adverse health behaviours like lack of exercise or physical inactivity, which are associated with various health problems that negatively threaten the medical and financial status of physically inactive individuals. Chronic health conditions caused by inactivity are linked to increased job absenteeism and health-care costs. According to WHO (2020), physical activity should be a priority for all people, irrespective of their age, because of its numerous health-promoting advantages.

Given this fact, one would expect the academic staff of the Akwa Ibom State College of Education (AKSCOE), Afaha Nsit, Nigeria, to take physical activity as their priority. The AKSCOE is located in Afaha Nsit village in Nsit Ibom Local Government Area, in the Uyo senatorial district of Akwa Ibom State, Nigeria. The institution is affiliated with the University of Uyo, Nigeria. It runs academic programmes leading to the award of both the Nigeria Certificate in Education (NCE) and the degree of Bachelor of Education (B.Ed). The academic programmes are offered in science education, education/vocational studies, education/humanities, education/social sciences, and core education. At the time of this study (18th March to 20th May 2019), the AKSCOE had 168 academic staff. They consistently perform various academic and administrative activities, some of which entail sitting in one place for long periods of time. They also make extensive use of technological devices, including computers, in doing academic and administrative work. Their physical activity levels tend to be lower than the standard recommended by the World Health Organization (2020), which states that an adult aged 18–64 years should engage in an average weekly volume of 150–300 min of moderate intensity or 75–150 min of vigorous intensity, or an equivalent combination of moderate-to-vigorous physical activity (MVPA) daily. The activity should be performed regardless of bout length. Being

less engaged in physical activity would mean that the subjects are inactive and would likely be affected by chronic diseases, obesity, and poor cardio-vascular health.

However, the levels of physical activity of the academic staff of the AKSCOE have not been established with respect to age, gender, and staff category. This study, therefore, is aimed at assessing the physical activity levels of the academic staff.

Research Questions

The following research questions guided the study.

1. What is the physical activity level of the academic staff of AKSCOE with respect to age?
2. What is the physical activity level of the academic staff of AKSCOE, Nigeria, with respect to gender?
3. What is the physical activity level of the academic staffs of AKSCOE, Nigeria with respect to job category (junior/senior)?

Methods

The survey research design was used in this study. The design allowed the researcher to study the physical activity lifestyle practices of the academic staff of AKSCOE as they actually existed without controlling the variables.

The population of the study consisted of the entire 168 academic staff of AKSCOE, Afaha Nsit (AKSCOE Records and Statistic Unit, 2019). Those in the population possess all the characteristics which the present study aimed at investigating.

A sample of 124 academic staff participated in the study. This sample was drawn after due screening using purposive sampling technique. Each staff member in the population was screened to ascertain whether he or she was sick or not. Two questions were asked: (1) Are you on regular medication because of your health condition? (2) Do you have any health problems or disabling conditions that restrict your participation in physical activity? Those who answered "Yes" to these two questions were excluded from the study. Those who answered "NO" were included in the study. Thus, 44 academic staff from the population of 168 were excluded from the study, leaving a sample size of 124 academic staff for the study. All in the sample met the inclusion criteria, which were that the participant must be a teaching staff member of the AKSCOE and must have no chronic illness. All in the sample gave their consent to participate in the study. Table 1 below presents the sampling frame and other variables' distribution.

Table 1: Sample Distribution and Other Factors (n = 124)

Variable	N	%
Age in years		
20-29	9	7.3
30-39	32	25.8
40-49	31	25.0
50-59	45	36.3
60+ years	7	5.6
Gender		
Female	79	63.7
Male	45	36.3
Category of Staff		
Junior Teaching Staff	88	71.0
Senior Teaching Staff	36	29.0
Level of Physical Activity (overall)		
High or vigorously active	14	11.3
Moderate or minimally active	5	4.0
Low or inactive	105	84.7
Sitting time (hours per day)		
0.5 – 4.5		
Junior Teaching Staff	30	24.2
Senior Teaching Staff	14	11.3
5 – 9.5		
Junior Teaching Staff	43	34.7
Senior Teaching Staff	19	15.3
≥ 10		
Junior Teaching Staff	15	12.1
Senior Teaching Staff	3	2.4

On instrument, the International Physical Activity Questionnaire (IPAQ) short form in English version, was adapted, validated by three researchers for local suitability, and used for data collection in this study. According to the IPAQ Research Committee (2010), the IPAQ is an original standardised instrument designed primarily for population surveillance of physical activity among adults aged 15–69 years. The IPAQ (short form version) asks about specific types of physical activity such as vigorous-intensity activities (e.g., heavy weightlifting, running, or swimming); moderate-intensity activities (e.g., gardening, washing the car or clothes by hand, or bicycling at normal speed); and walking performed by the respondent during the last 7 days preceding the interview. The IPAQ sitting question is an additional indicator variable and is not included as part of any summary score of physical activity.

The adapted IPAQ used in this study had two sections (A and B). Section A elicited information on respondents' age, sex, and category of staff (junior/senior teaching staff). Section B had all

the items in the original IPAQ short form version. Item 1 collected data on how many days in a week did the staff perform vigorous physical activities like lifting heavy weight, fast bicycling, fast skipping, basketball, football, singles tennis and badminton; and how much time did the staff spend in performing the activity per day. Item 2 gathered information on the type of moderate physical activity (such as press ups, sit ups, bicycling, carrying light weights, and doubles tennis) that the respondent had performed for at least 10 minutes in a stretch or at a time. And how much time in total did the staff spend on performing those moderate activities per day. Item 3 elicited data on how many days in a week did the staff walk for at least 10 minutes at a time (e.g., walking to church, market or to visit friends or while at work). And how many times in total did the staff spend on walking during those days in a week. Item 4 gathered information on the time spent sitting per day while at work, at home, or during leisure time. And the total length of time in which the staff spent sitting on weekdays.

Each item in section B of the adapted IPAQ attracts separate score based on the type of activity, duration and frequency of participation it represents. No score was given to item 4 that ask about the time spent sitting on weekdays, but, the summary of time spent on sitting by the respondents in this study is presented as one of the variables in Table 1.

The level of physical activity was computed by weighting the total scores on each type of activity by its energy requirements defined in metabolic equivalent of task (METs) to yield a score in MET-minutes. METs are multiples of the resting metabolic rates. According to IPAQ Research Committee (2010), MET minutes per week are calculated using the formula: Standardized MET value for the activity x minutes of activity x events (days) per week.

Physical activity level was reported as follows using the standard by IPAQ Research Committee (2010):

1. *Inactive or low physical activity level:* No activity reported or some activity is reported but not enough to meet categories 2 or 3.

2. *Minimally Active or moderate physical activity level:* Any of the following 3 criteria: ≥ 3 days of vigorous activity of at least 20 minutes/day or ≥ 5 days of moderate-intensity activity and/or walking of at least 30 minutes/day or ≥ 5 days of any combination of walking, moderate-intensity or vigorous intensity activities achieving at least 600 MET minutes/week.

3. *Vigorously active or high physical activity level:* Any of the following 2 criteria:

Vigorous-intensity activity on at least 3 days and accumulating at least 1500

MET-minutes/week or ≥ 7 days of any combination of walking, moderate or vigorous-intensity activities accumulating at least 3000 MET minutes/week.

The standardized MET values used in the computation of the total physical activity MET scores in the present study were derived from the work of Ainsworth, et al., (2011). In the work titled 2011 compendium of physical activities: a second update of codes and MET value, the following MET values were derived for walking, moderate-intensity activities and vigorous-intensity activities, and continue to be used for the analysis of IPAQ data: Walking = 3.3 METs, Moderate PA = 4.0 METs and Vigorous PA = 8.0 METs. Using these values, the calculation was done as shown in the sample below:

MET scores: using standardized MET-min/week for 30 minutes activity duration, in 5 days/week.

Walking = 3.3 METs $3.3 \times 30 \times 5 = 495$ MET-min/week

Moderate Intensity = 4.0 METs $4.0 \times 30 \times 5 = 600$ MET-min/week

Vigorous Intensity = 8.0 METs $8.0 \times 30 \times 5 = 1,200$ MET-min/week

The Total MET-min/week = (Walk METs x min x days) + (Mod METs x min x days) + Vig METs x min x days) = $495 + 600 + 1,200 = 2295$ MET minutes/week.

An individual achieving less than 600 MET minutes per week had low physical activity level and was considered inactive. The one achieving ≥ 600 MET minutes/week was considered moderately active, while the one accumulating ≥ 3000 MET minutes/week was highly active.

The entire 124 respondents completed the copies of the adapted IPAQ administered to them in their respective departments/offices in the AKSCOE. The completed questionnaires were retrieved and used for analysis.

Descriptive statistics (frequencies and percentages) were used for data analysis. The analysis of data was performed using *SPSS*, version 17.0.

Results

The results are presented and analysed in Tables 2 - 4.

Table 2: Physical Activity Level of Academic Staff of AKSCOE by Age

Age in years	N	%	Physical activity level		
			High level or vigorously Active	Moderate level or minimally Active	Low level or inactive
20-29	9	7.3	2 (22.2%)*	1 (11.1%)	6 (66.7%)
30-39	32	25.8	5 (15.6%)	2 (6.3%)	25 (78.1%)
40-49	31	25.0	3 (9.7%)	1 (3.2%)	27 (87.1%)
50-59	45	36.3	4 (8.9%)	1 (2.2%)	40 (88.9%)
60+ years	7	5.6	0 (0.0%)	0 (0.0%)	7 (100%)
Overall	124	100	14 (11.3%)	5 (4.0%)	105 (84.7%)

*Figures in parentheses represent percentages. Low level of Physical Activity (< 3 METs); Moderate level of physical activity (≤ 3 to 5 METs); Vigorous level of physical activity (≥ 5 METs)

Table 2 shows that 22.2% of the academic staff in the age bracket of 20-29 years were vigorously active. The entire 100 % of the academic staff in the age group of 60+ years had low level of physical activity. They were physically inactive. Higher proportion of those in the age brackets of 50-59 years (88.9%), 40-49 years (87.1%), 30-39 years (78.1%) and 20-29 years (66.7%) also had low level of physical activity. In overall, 84.7 per cent of the academic staff from all age brackets had low level of physical activity.

Table 3: Physical activity level of Academic Staff of AKSCOE by Gender (n = 124)

Gender	N	%	Physical Activity Level		
			High level or Vigorously Active	Moderate level or Minimally Active	Low level or Inactive
Female	79	63.7	9 (11.4%)	3 (3.8%)	67 (84.8%)
Male	45	36.3	5 (11.1%)	2 (4.4%)	38 (84.4%)

As shown in Table 3, equal proportion of female staff (11.4%) and the male staff (11.1%) were vigorously active. Higher and equal proportion of both female (84.8 %) and male (84.4%) academic staffs were inactive.

Table 4: Physical Activity level of Academic Staff of AKSCOE by Category (n=124)

Category of staff	N	%	Physical Activity Level		
			High level or Vigorously Active	Moderate level or Minimally Active	Low level or Inactive
Junior teaching	88	71.0	21(23.9%)	8 (9.1%)	59 (67.0%)
Senior teaching	36	29.0	10 (27.8%)	2 (5.5%)	24 (66.7%)

Data in Table 4 indicate that 27.8 per cent of the senior teaching staff and 23.9 per cent of the junior staff were vigorously active. The table further shows that majority of both the junior (67.0%) and senior (66.7%) teaching staffs were inactive.

Discussion

Considering age and physical activity levels of academic staff in AKSCOE, findings revealed that the entire 100 per cent of the staff aged 60+ years in AKSCOE, Afaha Nsit had low level of physical activity. Higher proportion of those in the age brackets of 50-59 years (88.9%), 40-49 years (87.1%), 30-39 years (78.1%) and 20-29 years (66.7%) also had low level of physical activity. This means that majority of the teaching staff of AKSCOE in all age brackets were physically inactive. The result was frightening as it portrayed the message that the inactive workers are most likely to be unhealthy and unproductive. They seem to be at risk of developing heart diseases, high blood pressure, high blood cholesterol, obesity and other non-communicable diseases that are common among the inactive population. According to Shephard (1997), physically inactive workers are prone to frequent illnesses, injuries, absenteeism and job dissatisfaction. World Health Organization (2018) affirmed that only physically active workers are healthier, productive with lower rate of work absenteeism, and are less likely to develop chronic diseases such as cardiovascular disease, type 2 diabetes, and several types of cancer than the adults who are inactive. When considering the result deeply, it was found that, in overall, only 11.3 per cent of teaching staff from all age brackets was vigorously active. A number of reasons could be attributed to the observed results. It might be that workplace physical activity and sport programmes for teaching staff are lacking in AKSCOE, Afaha Nsit. If present, it may be poorly or inadequately implemented. Outlets for physical activity such as physical fitness centres, sport/recreation clubs, and gymnasium may also be lacking in the institution. Policies on staff participation in physical activity may also not be

available. The workers may likely be ignorance of the benefits of physical activity, or may be having negative attitude towards participation in physical activity. The workers may also lack health education on benefits of physical activity, as well as expert's guidance on age-specific type, duration, frequency, and intensity of physical activity required for attainment of active physical activity level. Their inactive state may also be blamed on their consistent use of computers, electronic and technological devices in job performance.

On gender, the results indicate that equal proportion of female (11.4%) and male (11.1%) respondents were vigorously active. This result was surprising. However, Abel, et al. (2011) reported that while men were participating in sports and exercise, the females equate their physical activity level with men by performing daily walking, biking and domestic activities.

Finding further revealed that almost equal proportion of female (84.8%) and male (84.4%) respondents were inactive. This result indicates that the levels of physical inactivity were high among the male and the female teaching staff of the AKSCOE. This might mean that both male and female teaching staffs are at higher risk of developing non-communicable diseases such as cardiovascular disease, diabetes, cancer, raised blood pressure, raised blood sugar and overweight/ obesity. World Health Organization (2009) reported that for the females, physical inactivity is the principal cause for approximately 21–25 per cent of breast and colon cancer; 27 per cent of diabetes and approximately 30 per cent of ischaemic heart disease. Being physically active is the only way to reduce the risk of non-communicable diseases (Qomanyah & Djannah, 2019).

On the physical activity levels of junior and senior teaching staffs of the AKSCOE, finding revealed that only 27.8 per cent of the senior teaching staff and 23.9 per cent of the junior teaching staff were vigorously active. The remaining higher proportions of both categories of staffs were physically inactive. The implication of the finding is that all categories of teaching staff in the AKSCOE would require intervention programme geared towards improving their physical activity levels. The US Department of Health and Human Services (2010) recommended worksites physical activity and fitness programmes as mechanism for reaching large numbers of staff and motivating them to participate in physical activity. Given that the employees spend the greater part of their time in their workplaces.

Conclusion

Based on the findings, it was concluded that higher proportion of teaching staff in all age brackets in AKSCOE, Afaha Nsit, had low level of physical activity. The entire 100 per cent of those aged 60+ years were inactive. Similarly, higher percentages of both female and male teaching staffs, as well as junior and senior teaching staffs also had low level of physical activity.

Recommendations

The following recommendations were made:

1. The workplace physical activity and fitness programme should be developed for the teaching staff of AKSCOE, Afaha Nsit.

2. The AKSCOE medical center should carry out routine medical examination and screening of the physically inactive teaching staff of the institution to ascertain their health status since they are found to be at risk of developing non-communicable diseases such as heart diseases, diabetes, hypertension, overweight and obesity.
3. The management of the AKSCOE should provide facilities and equipment for workplace physical activity. These may include staff recreation centre.

REFERENCES

- Abel, T., Graf, N. and Niemann, S. (2011). Gender bias in the assessment of physical activity in population studies. *Journal of Preventive medicine*, 46: 266 – 272.
- Aghal, S. Y. and Al-Dabbaghi, S. A. (2010). Level of physical activity among teaching and support staff in the education sector in Dohuk, Iraq. *Eastern Mediterranean Health Journal*, 16 (12), 1277-1284.
- Ainsworth, B., Haskell, W. L., Herrmann, S. D., Meckes, N., Bassett, D. R., Tudor-Locke, C., Greer, J. L., Vezina, J., Whitt-Glover, M. C. & Leon, A. S. (2011). 2011 compendium of physical activities: A second update of codes and MET values. *Medicine and science in sports and exercise*, 43(8), 1575-1581.
- AKSCOE Records and Statistics Unit (2019). Staff enrolment. Unpublished Annual Report.
- Biddle, S.J., Fox, K. R., and Boutcher, S. H. (2000). *Physical activity and psychological wellbeing*. London: Routledge.
- Cooper, R. (2010). The benefits of exercise in promoting long and healthy lives. *Methodist DeBakey Cardiovascular Journal*, 6 (4), 10-15.
- Donaldson, L. (2009). Evidence for the health benefits of physical activity. *England Journal of Public Health*, 42(1), 355 – 362.
- Eboh. L. O.; Money, F. O. and Boye T. E. (2007) Implication of RECREATION Participation profile and Perceived Wellness among Academic Staff in Delta State Tertiary Institutions of Higher Learning. *Journal of Nigeria Association of Sports Science and Medicine (ONASSA)*, 5: 105- 109.
- Hallal, P. C., Andersen, L. B., Bull, F. C. and Guthold, R. (2012). Global physical activity levels: Surveillance progress, pitfalls and prospects. *Lancet*, 380(98), 247 – 257.
- IPAQ Research Committee (2010). *Guidelines for data processing and analysis of the international physical activity questionnaire – short and long forms*. Stockholm: Karolinka Institutet.
- Qomanyah, N. and Djannah, S, N, (2019). Health and physical activity among academic and non-academic staffs in higher education in Indonesia. *International Journal of Evaluation and research in Education*, 8(1), 97 – 102.
- Shakey, K. and Gaskell, J. (2013). Review of the benefits of physical activity for health and well-being. In: Hancock, H. (Ed.), *collaborating for health*. London: Rougher press.
- Shepherd, R., (1997). Exercise and relaxation in health promotion. *Journal of Sports Medicine*, 23(4), 211-216.
- Thomas, J. H. (2019). Physical activity and perceived barriers to engagement among university staff in Canada. *Journal of Physical activity and Health*, 16 (6), 1-10.

U.S. Department of Health and Human Services, (2010). *Physical activity fundamental to preventing disease*. Available at <http://aspe.hhs.gov/health/reports/physicalactivity/physicalactivity.pdf>

World Health Organization (2020). *Guidelines on physical activity and sedentary behaviour*. Geneva: World Health Organization.

World Health Organization (2018). *Global action plan on physical activity 2018-2030: more active people for a healthier world*. Geneva: World Health Organization

WHO (2009). *Global health risks: mortality and burden of disease attributable to selected major risks*. Geneva: WHO.