

## Physical Exercise and Job Performance of Lecturers in State Universities Across South-East Nigeria: A Stress Management Approach

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### Abstract

This study examined physical exercise and job performance of lecturers in state universities across south-east Nigeria. The health belief model was adopted as framework for this cross-sectional descriptive survey. A sample size of 1,422 respondents; made up of 1,414 quantitative respondents and 8 qualitative interviewees who were randomly drawn from the four selected universities namely: Abia State University, Chukwuemeka Odumegwu Ojukwu University, Enugu State University of Science and Technology and Imo State University. A structured questionnaire formulated and proportionally administered to respondents using Yamane's (1967) formula. The multi-stage sampling techniques was adopted to select respondents across faculties and departments. In each faculty, 3 departments were random sampled, thereafter, each department was proportionately sampled, while quantitative data was presented using descriptive statistics such as simple frequency distribution tables, percentages, weighted mean score. The chi-square statistical tool was used to test the stated hypothesis (P Value= <0.001), while qualitative data was collected through in-depth interview. The study found that, although, lecturers understand the importance of physical exercise, they do not engage in it owing to challenges such as poor remuneration, none availability of fitness centers among others. It recommends that university management should prioritize sensitization of staff on the benefits of physical exercise to their wellbeing and the need for provision of fitness centers as a stress management strategy to improve job performance.

**Keywords:** *Physical exercise, Job performance, Stress management, State universities*

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### **Background to the Study**

Lecturers are the drivers of education policies. As such, they require physical and mental wellbeing as a prerequisite to contribute to students, institution and personal career advancement. Hence, it is proper to say their performance is tied to physical and mental wellbeing. Despite the important played by lecturers in the knowledge economy, their job comes with daunting demands in the areas of teaching, research and community service, as lecturers strive to meet job expectations and the concomitant stress that comes with it. The Nigeria Medical Association revealed that 76 percent of lecturers in Nigeria higher institutions suffer from cardiovascular and other health related issues yearly due to stress (Agunanne, Akakuru, Oparanozie & Achonu, 2022). It is therefore apt to say that stress among academics is a ubiquitous silent killer.

Physical exercise is any deliberate bodily activity embarked upon to maintain overall health and bodily fitness (Siddiqui, Nessa & Hossain, 2010; Ma, So & Choi, 2023). Physical exercise is a stress management strategy which promotes physical and mental health, this correlation is supported by Reed (2021) who assert that physical activities improve brain health and cognitive function, reduces anxiety and depression, improves sleep and overall quality of life. Akodu, Owoeye, & Raufu (2016) explain that physical fitness is an anti-stressor which improves performance. Siddiqui et al (2010) divided physical exercise into two namely, aerobic and anaerobic. Aerobics such as walking, running, jogging and swimming is beneficial to contraction and relaxation, forces deep breathe and pumps more blood with adequate tissue oxygenation, while anaerobic exercise which involves weightlifting, pulling, pushing and printing improves the movements of muscles, joints and ligaments (Siddiqui *et al*, 2010). Despite the importance of physical exercise to performance, the World Health Organization (2014) estimated about three million physical inactivity-related deaths occurred in Sub-Saharan Africa 2014. Nigeria occupies a disproportionately higher burden in poor physical exercise due to several factors including increase in unhealthy lifestyles, sedentary living and stress (World Health Organization, 2003).

In Nigerian universities, job stress arises from teaching large classes, examination invigilation and assessment demands, undergraduate and post-graduate students' research supervision, publication demands in reputable research journals and community services. These expectations come with dire implications on the physical and mental wellbeing of lecturers, hence the need for physical exercise. Madell (2020) recommends that physical exercise such as aerobics, walking, jogging, swimming and cycling can help improve the physical and mental quality of life, by relieving the tension, anxiety, anger, and mild depression which are associated with stress. Madell (2020) continues that, physical activity increases the use oxygen and blood flow, stimulate the production of endorphins which promote a sense of wellbeing and euphoria which is necessary to defeat the strains of stress.

According to American Psychological Association (2018), regular physical exercise is a stress management strategy which enables the human body to douse the wears and tears of unbalanced work life. A chronically stressed employee without the option of adequate and regular physical exercise may develop high blood pressure, gastric ulcers, and difficulty in

making decisions, loss of appetite, accident, and death (Kiani, Latif, Bibi, Rashid & Tariq, 2017). Physical exercise is a potency for stress management. Unmanaged stress could create changes in metabolism, increase in heart and breathing rates and blood pressure, headache, heart attack and sudden death (American Psychological Association, 2018). Unmanaged stress may increase the vulnerability of lecturers to psychological and behavioral problems such as depression, fatigue, low productivity, absenteeism and severed relationship with family and colleagues (Safaria, 2013; Akodu, *et al*, 2016; Adom, Chukwuere & Osei, 2020).

The objective of physical exercise is to check the effect of stressors. Unchecked chronic stress can impact physical health and increase risk of high blood pressure, heart attack, stroke, diabetes, obesity, cancers, osteoporosis, mental health disorders and risk factors that militate against performance (American Psychological Association, 2018; Ingris Health, 2021). Furthermore, physical inactivity has been shown to increase the risk of cardiovascular disease which is a risk factor for common non-communicable diseases among university lecturers (Siddiqui *et al*, 2010; Akodu, *et al*, 2016). Considering the implications of lack of physical exercise, this study will uncover whether lecturers in state universities across south-east Nigeria engage in physical exercise. It will also uncover the frequency of exercise in enhancing job performance as well as the role of university management in promoting physical activities among their lecturers.

### **Theoretical Framework**

The Health Belief Model (HBM) developed by Hochbaum, Rosenstock and Kirsch in the 1950's is most appropriate for this study. HBM is built on six premises namely: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, self-efficacy, cues to action and preventive health behaviours.

The major assumption of HBM is that an individual's views about particular event can drive their attitude to conform to a health behaviour. Firstly, theory explains that an individual's desire to act is dependent on either the positive or negative views they hold about outcomes on their health. Secondly, the stronger their views on the implications of their actions on general wellbeing, the greater they are motivated to act to avoid that negative health outcome. Thirdly, individuals must perceive that the target behavior will provide strong positive benefits. Fourthly, people will be less motivated towards their wellbeing if they perceive that there are strong barriers preventing them from doing so. Fifthly, individuals are perceived as being capable of performing that particular behavior and finally, HBM is a cue to action whereby individuals is spurred to adopt preventive behavior by some additional elements (Amare, Ayenew, Tadesse, Jemal, Molla, Natnael & Ali, 2022).

Physical exercise is a voluntary health behavior which is largely influenced by knowledge and perceived benefits which lecturers' hold about it. The willingness to engage in physical exercise is influenced by lecturers' perceptions on its benefit to their wellness, if these benefits are positively interpreted, academics will cue to act. Cue to action are external events that prompt desire from merely wishing to make a health change into actualizing the change (Boskey, 2023). It is probable that lecturers, irrespective of levels in educational

attainment may not fully appreciate the dangers and contributions of physical inactivity to stress and low job performance, they may not understand that morbidity factors associated with poor exercise increases job stress, concomitant bodily pain and other illnesses posed to their health. People may not show positive disposition towards physical exercise if they do not fully appreciate its benefit to their wellbeing (Ma *et al*, 2023). Therefore, the probability to engage in physical fitness will greatly depend on the knowledge, practice, as well as conditions that influences their health believes.

### **Research Design**

This descriptive survey research design comprised of predetermined questions which are given to respondents from the larger population of research interest. The survey was carried out among lecturers of five state owned universities in south-east Nigeria namely: Abia State University, Chukwuemeka Odumegwu Ojukwu University, Ebonyi State University, Enugu State University of Science and Technology, and Imo State University. Abia state University has 11 faculties and 65 departments, Chukwuemeka Odumegwu Ojukwu University has 13 faculties made up of 50 departments, Ebonyi State University comprises of 11 faculties and 58 departments, Enugu State University of Science and Technology has 8 faculties and 59 departments, while Imo State University has 14 faculties and 64 departments (field survey, 2023). The total number of lecturers is 3,130.

Furthermore, academic staff of four state owned universities were randomly selected from the five institutions, this includes regular lecturers ranging from assistant lecturers, lecturer 2, lecturer 1, senior lecturers, associate professors to professors. The population of the study is 1,647, being the population of lecturers randomly selected from 28 departments in the 10 selected faculties of each university. A sample for the quantitative study is 1,414, this was statistically generated using Yamane (1967) statistical method of determining sample size.

For the qualitative study, eight interviewees, comprising four faculty deans and four executive members of Academic Staff Union of Universities was drawn from the universities. The total sample size for this study is therefore, 1,422. The multi-stage sampling techniques involving simple random sampling, and purposive sampling was adopted to select respondents for this study. For the quantitative study, simple random sampling technique was used to select four, out of the five state owned universities in the south-east. The four universities are: Abia State University, (581 lecturers); Chukwuemeka Odumegwu Ojukwu University, (615 lecturers); Enugu State University of Science and Technology (656 lecturers) and Imo State University (675 lecturers). Furthermore, 10 faculties, namely: social sciences, engineering, agricultural sciences, environmental management, medical/health sciences, physical sciences, natural sciences, law, education, and humanities were randomly drawn, and simple random sampling technique was used to select three departments from each of the selected faculties, making a total of 28 departments in each university. Thirdly, each of the department were proportionately sampled to generate respondents for the study and this method is most appropriate because the various departments do not have equal number of academic staff.

Eight interviewees; comprising of four faculty deans and four executive members of ASUU

were selected across each university. The questionnaire was used to obtain quantitative data, while in-depth interview is for obtaining qualitative data. A four-point likert scale questionnaire was used. The questionnaire was divided into two sections namely: socio-demographic data and substantive issues of time management strategies and job performance of lecturers. The questionnaire was administered by the researcher with the help of four research assistants. The researcher moderated the interviews, while the research assistants recorded the interviews.

The quantitative data was processed with the Statistical Package for Social Sciences (SPSS) Version 20.0 and analysed using descriptive statistics such as simple frequency distribution tables, percentages, and weighted mean score, while chi-square inferential statistics was used to test the stated hypotheses. The qualitative data collected through in-depth interview was coded, processed and analyzed utilizing QDA Miner software.

### Test of Hypotheses

H<sub>0</sub>: The rate of physical exercise among lecturers of state universities in south-east Nigeria has no significant relationship on their stress elevation.

H<sub>1</sub>: The rate of physical exercise among lecturers of state universities in south-east Nigeria has significant relationship on their stress elevation.

**Table 1:** Cross Tabulation between Rate of Physical exercise and effect on stress

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2743.908 <sup>a</sup>	9	.000
Likelihood Ratio	2470.899	9	.000
Linear-by-Linear Association	1086.234	1	.000
N of Valid Cases	1303		

$$X^2 = 2743.908, DF=9, P\text{ value} = <0.001$$

*\*Significant relationship on stress elevation*

The rate of physical exercise among lecturers of state universities in the south-east was found to be statistically significant with lecturer's view on impact of stress elevation at  $p < 0.001$  level of significance. This implies that there is a significant relationship between the rate of physical exercise and stress elevation among lecturers of state universities in south-east Nigeria. This means that frequency of physical exercise performed by lecturers reduces the spillover effects of stress and enhances their job performance. Therefore, physical exercise is vital job performance.

### Results and Analysis

For this study 1,414 copies of the questionnaire were distributed and only 1,303 (92.1%) were returned. The socio-demographic profile of the respondents revealed that 134 (10.3%) respondents are within the ages of 20-29 years. 381 (29.2%) respondents are within the ages of 30-39 years, 33.0% (430%) are between the age of 40 – 49 years of age, 430 (33.0) respondents are within 40-49 years, 150 respondents representing 11.5% are within the age bracket of 50-



59, and 208% respondents representing 16.0% are 60 years above. Hence, most of the respondents fall within the age bracket of 40-49 years. In terms of sex composition 892 respondents (68.5%) are male, while 411 female respondents representing 31.5% are selected for the study. Therefore, majority of the respondents are male lecturers. Data shows that 1,104 (84.7%) are Christians, 49 (3.8%) are Muslims, while 150 (11.5%) are traditional religion adherents. This shows that majority of the respondents are Christian religion adherents.

With regards to marital status, 358 respondents (27.4%) are single, 139 respondents (11.6%) are divorced, 143 respondents (11.9%) are separated, 127 respondents (9.6%) are widowed, 74 respondents (5.6%) are co-habiting, while 462 respondents (35.4%) are married. Hence, we conclude that a high proportion of the respondents are married. The study also found that 882 respondents which constitute 67.7% are Ph.D. holders in their various disciplines, while only 421 respondents which make up 32.2% percent are second degree certificate holders. Therefore, majority of the respondents in this study are Ph.D. holders. In terms of official rank, data reveals that 127 respondents (10.0%) are assistant lecturers, 261 (20.0%) are lecturer 2, 234 (31.7%) are lecturer 1, 414 (12.5%) are senior lecturers, 163 (8.0%) are associate professors, while 104 (18.0) are professors. This means that lecturer 2 are more in the sample.

Analyses are made using the likert scale technique which involves the computation of the scores of responses and means. The mean for each questionnaire item is compared with the criterion mean and decision is taken on whether the questionnaire item is “positive” or “negative” to the issue under discussion. The mid-point of 2.50 is taken as the criterion mean. Questionnaire item with a mean value of 2.5 or more is regarded as “positive” while item with mean value less than 2.5 is regarded as “negative.”

**Table 2:** Analysis of Quantitative Data on Physical Exercise among Lecturers and Stress Management

S/N	Item caption	Responses				Total Weighted score	Total number of respondents	Mean score	Decision	Group mean
		SA	A	D	SD					
1	Frequent exercise reduces job stress	256 (1024)	470 (1450)	366 (732)	211 (211)					
2.	Staff engagement in physical exercise to improve job performance	113 (452)	112 (336)	336 (672)	742 (742)	2202	1303	1.68		
3.	Frequency of physical exercise spillover effects of stress	248 (992)	231 (693)	591 (1184)	233 (233)	3102	1303	2.38		
4.	Management encourages physical exercise among lecturers	159 (636)	308 (924)	635 (1270)	201 (201)	3031	1303	2.32	Reject	2.24

Source: Field survey, 2023

On the frequency of exercise to reduce job stress, questionnaire item 1 shows that 256 respondents strongly agreed that frequent physical exercise reduces job stress and 470 respondents agreed that frequent physical exercise reduces job stress. However, 366 respondents and 211 respondents disagreed and strongly disagreed respectively. The mean value of 2.59 is regarded as positive and therefore accepted. This means that a majority of lecturers agree on the importance of frequent exercise in stress management.

On whether they engage in physical exercise, questionnaire item 2 shows that 113 respondents strongly agreed that they engage in frequent physical exercise to improve their job performance and 112 respondents agreed. However, 336 and 472 respondents who constitute the majority disagreed and strongly disagreed respectively. The mean value of 1.68 is regarded as negative and therefore rejected. Thus, it is agreed that lecturers in state universities in south-east Nigeria do not engage in enough frequent physical exercise to reduce stress and consequently improve their job performance.

Questionnaire item 3 probed further on the frequency of physical exercise to relieve spillover effects of stress among lecturers. 248 respondents strongly agreed that physical exercise relieves the spillover effects of job stress and 321 respondents agreed. Furthermore, 635 and 201 respondents disagreed and strongly disagreed respectively. The mean value of 2.32 is regarded as negative and therefore rejected. The response agrees with data from questionnaire item 2 which showed that lecturers do not engage in physical exercise as the frequency of it does not relieve the spillover effects of job stress.

On whether university management encourages physical exercise among lecturers, questionnaire item 4 shows that 159 respondents strongly agreed that university management provides enabling environment that encourages lecturers to engage in physical exercise, and 308 respondents agree. On the other hand, 635 respondents and 201 respondents disagreed and strongly disagreed respectively. The mean value of 2.38 is regarded as negative and therefore rejected. Finally, the group mean score of 2.24 shows that the overall response is negative which indicates that university management do not provide enabling environment that encourages lecturers to engage in physical exercise as a stress management strategy.

### **Analysis of Qualitative Data on Physical Exercise and Stress Management**

Data from the qualitative study revealed that majority of interviewees agree that physical exercise is a stress management strategy. According to a respondent:

*Exercise is good both for the body and the mind, you know most times we sit down for long ours, so exercising sharpens our mind and also makes us fit. On this I will encourage staff to try as much as possible to embark on physical exercise very often. Since the administration does not have such programs, we should imbibe a positive attitude to keeping fit (Male, Age 41; Married; Ph.D.; length of service 10 years; ASUU executive).*

Corroborating the above statement, a respondent assert that:

*The university administration have a lot of challenges to grapple with, exercise should be the least of it. We are academics, do we need someone to teach us*

*about the importance of exercise? The only aspect I will agree on is the fact that we don't have a staff club where our colleagues can go on weekend and keep fit. But for me, I usually feel refreshed after going for Saturday physical exercise it is very helpful in relieving stress. The only challenge is that most times I don't have enough time to embark on it (Male, Age 51; Married; Ph.D.; length of service 21 years; Dean).*

In addition, Interviewees gave a common assessment on the role of universities in promoting physical exercise. According to a respondent:

*Well to think of physical exercise in the light of the role which management plays is very predictable. This school still finds it hard to pay common salaries how much more equipping a fitness center or even a common staff club for relaxation. You can go and ask my colleagues, our health is our personal problem, management is not interested, and I encourage my colleagues to do little exercise any time they have the time to do so. (Male; Age 45; Married; Ph.D.; length of service 12 years; ASUU executive).*

When probed further, the interviewee espoused that:

*How do you expect academics who have not been paid months of salaries to exercise themselves when they don't have food in their stomach? How do you expect a VC who cannot even disturb the government on our salary problems to think of staff fitness, I am sorry but that is the naked truth and it is fruitless to keep on talking about spillover effects of physical exercise under such inhuman conditions (Male; Age 45; Married; Ph.D.; length of service 12 years; ASUU executive).*

The above qualitative data also corroborate the response of an interviewee who assert that:

*We don't exercise often, except on Saturdays when few of us may come out to do light jogging although I must also say not everyone comes out to do it. Some people also exercise at home. So, it is an institutional thing (Female; Age 53; Married, Ph.D.; length of Service 22 years; Dean).*

The interviewer probed the strategy adopted to promote physical exercise among lecturers in state universities. A respondents said:

*You know, our job is sedentary in nature. If you don't look for a way to keep fit, you may develop health complications, so I encourage everyone to key in and do some walking down to the office, stretches (Male; Age 46; Married, Ph.D.; length of Service 10 years; ASUU executive).*

From the responses in the interview, it is clear that lecturers in southeast do not exercise themselves enough to overcome stress. The study also discover that universities do not sensitize their academic staff on the importance of physical exercise neither do they have designated fitness centers. The qualitative response aligns with the group mean score findings (2.24) in the quantitative study.



### **Discussion of Findings**

The study examined the impact of stress management on the performance of lecturers in state universities in south-east Nigeria. The quantitative data found that majority of lecturers know the benefit of physical exercise to their wellbeing. However, they do not engage in physical exercise owing to reasons such as worries over remuneration, none availability of fitness centers among others. The interviewees align with the quantitative response and argued that, although, physical exercise is a prerequisite for stress management, it is of little value to their wellbeing owing to backlogs of unpaid salaries which dampens the morale of academic staff to engage in it. However, irrespective of its importance, the impacts of delayed and poor remuneration undermine lecturers' attitude to engage in physical activities. Although, Kim and Mckenzie (2014) argue that subtle physical workout promotes physical wellbeing of employees and enables them to perform their tasks with minimal error. Similarly, findings from the study opens up another front in the research on stress management and calls for further probe on the relationship between remuneration and regular exercise. Although the hypothesis found a significant relationship between physical exercise and job performance at  $P\text{ value} < 0.001$ , it is also clear that there is no streamlined exercise for lecturers in state universities in south-east Nigeria. Hence, the prevalent exercise is haphazardly tied to the personal idiosyncrasies of lecturers.

### **Recommendations**

From analysis thus far, it is clear that physical fitness strongly correlates to the performance of academics. Thus, in other to improve the general wellbeing of university lecturers, the study recommends that lecturers who are 65 years old and above should prioritize aerobics such as walking, running and jogging which is beneficial to relaxation and improve blood flow, while younger lecturers may partake in anaerobic exercise such as weight lifting, pulling and pushing, which aids improvement of muscles, joints and ligaments. Furthermore, lecturers' should draw up routine exercise schedules for themselves. Finally, university management should provide fitness centers in schools and sensitize academics on the importance of mental and physical fitness to their wellbeing and job performance.

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