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Full Length Research Paper

Utilization of physical exercise by students of Cross River State tertiary institutions to achieve good health in the new millennium

L. O. Ogunjimi[1]*, Patience Samson Akpan[2] and M. M. Ikorok[3]

[1]Department of Human Kinetics and Health Education, Faculty of Education, University of Calabar, Nigeria.
[2]Department of Nursing Sciences, University of Calabar, Nigeria.
[3]Department of Physical and Health Education, Faculty of Education, University of Uyo, Nigeria.

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The numerous advantages of participation in physical activities (physical exercise) are: increased efficiency of heart and lungs; increased muscle strength and endurance; maintenance of proper body weight; and reduction of risk of coronary heart diseases. The study was conducted to ascertain students' knowledge of the effects of physical activities on their health as well as their level of participation in physical activities, for the purpose of achieving optimum level of health (wellness) in the new millennium. A total of three hundred (300) students randomly selected from the three campuses of tertiary institutions in Calabar served as subjects of the study. Three research questions were generated to guide the study. A well structured and validated questionnaire was used to gather information from the subjects. The study revealed that most of the subjects of the study (96%) displayed high knowledge of the effects of physical activities on human health. Level of participation in physical activities was found low, probable reasons deduced for poor level of participation were enumerated, while suggestions were made on how to raise level of participation in physical activities with the aim of using same to achieve good health/optimum level of well being in the new millennium.

Key words: Physical activities, university students, utilization, good health.

INTRODUCTION

Numerous studies revealed that physical exercise or physical activity is one of the health promoting activities among several factors (Insel and Roth, 2004; Ntui, 2000; Ajala, 2005). Sedentary or in active life is a slow poison to the skeletal, cardiac and visceral muscles which thrive in activity in general (Ntui, 2000). Any muscle, according to Ntui (2000), which is not exercised, atrophies. This view is supported by Bullock (1992) who states that lack of muscle use results in atrophy. Ajala (2005) also posits that the following health problems were either linked with or made worse by getting too little exercise: overweight, feeling tired all the time, shortness of breath, stomach upsets, headaches, backache, weak muscles, high blood pressure, accelerated aging, heart disease, injuries to muscle, ligaments, tendons; injuries and pains in bones. The author further states that, the connection between

*Corresponding author. E-mail: segunjimilucas@yahoo.com.

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this gloomy list of health problems and lack of exercise is simple. The body is like a finely tuned, complicated machine. If cared for, the different parts keep working well. If neglected, those parts get creaky and rusty. They break or get injured more easily. Therefore, it is obvious that exercise participation whether for competitive, recreation, fitness or rehabilitative purposes are in consonance with the health promotion and wellness goals of the present millennium.

The benefits of physical activity are well documented in literature (Kozier et al., 2004; Ntui, 2000; McGlynn, 1997; Ajala, 2005). The benefits of physical activities as revealed by a study of students in a large Midwestern University of which 77% participants exercised and their reasons were health, maintenance of fitness, stress reduction, enjoyment, and feeling good (Katrina, 2008). Actually, increased awareness of the health benefits of physical activity has led to increased recognition of the need for initiatives to reduce sedentary life styles (U. S. Department of Health and Human Services, 1996; American Heart Association, 1995).

According to Center for Disease Control (CDC, 1997), International Consensus Conference on Physical Activity Guidelines for Adolescents recommends that "all adolescents … be physically active daily, or nearly every day, as part of play, games, sports, work, transportation, recreation, physical education or planned exercise, in the context of family, school and community activities". Furthermore, "adolescents should engage in three or more sessions per week of activities that last 20 min or more at a time and that require moderate to vigorous levels of exertion" (Sallis and Patrick, 1994).

Despite the benefits, research still indicates that participation in physical activities is low. Moreover, CDC (1996) notes that although children and adolescents are more physically active than adults, many young people do not engage in moderate or vigorous physical activity at least 3 days in a week. Indeed a study among students of Ohio State University Columbus revealed that 52% of the students were physically inactive and 31% had exercised regularly for six months or longer while 17% had exercised regularly for less than six months (Society for the Advancement of Education, 2001). According to the author "the steepest decline in the number of people who are involved in physical activity occurs during adolescence and early adulthood.

University students in Nigeria find themselves in a precarious situation where regular physical activity is not built into the academic programme. Inactive lifestyle has become a threat to several students. This is because university students are faced with long hours of cogitation, listening to lectures, reading in libraries, and browsing on computers. Moreover, emphasis is placed on producing sport talented groups who can win laurels for the institution not only in Nigeria but elsewhere (Okunbor and Agubuike, 2007). There are serious concerns raised by several international bodies (WHO, UNESCO, IOC, CDC and others) on insufficient amount of appropriate physical and wellness activities (WHO, 2000; Okunbor and Agubuike, 2007). The level of participation of such students is not always governed by choice but often by unequal access to opportunities. Many students of South- South Zone of Nigeria tertiary institutions of which Calabar is located are deprived of living active lifestyles because they have limited physical, human and financial resources.

Low participation in exercise among university students is attributed to barriers such as; lack of knowledge, motivation, time and social support, laziness, perceived lack of safety, fear of injury or health problem, and lack of self-confidence among others (Katrina, 2008; Society for the Advancement of Education, 2001). Studies have indicated the structured wellness programmes can improve university students' attitude towards physical activity/exercise (Mack and Shaddox, 2004).

Urban planning, infrastructure development, schools, the workplace, government at all levels and sporting organisations all have an impact on people's willingness and capacity to engage in regular physical activity. Indeed, individuals can sustain a regular regime of moderate physical activity if it is incorporated into their daily routine. Promoting walking or cycling to work or school or creating urban and regional environments that are considered safe and promote walkability can therefore achieve significant long-term growth in the level of physical activity in the community.

Consequently, this study was undertaken to ascertain the students' level of knowledge of benefits of physical activities on their health, their level of participation in physical activities as well as to identify barriers to physical activities, which can hinder achievement of optimum health in the new millennium. Optimum level of health implies high level wellness of which regular physical activity is one of the factors that influence its. Wellness means optimum health and vitality, encompassing physical, emotional, intellectual, spiritual, interpersonal, social and environmental wellbeing (Insel and Koth, 2004). Three research questions were generated to help guide the study. The study therefore attempted to answer the following questions.

1. How adequate is the knowledge of students of tertiary institutions on the benefits derivable from physical activities?
2. What is the level of participation in physical activities among students in Cross River State tertiary institution?
3. What are the barriers militating against the students' participation in regular exercise (physical activity)?

METHODS AND PROCEDURE

The population of the study consisted of all students in tertiary institutions in Cross River State. The university campuses in Calabar were chosen because of large concentration of students.

Table 1. Knowledge of the benefits of exercise or physical activity among students of tertiary institutions in Cross River State, Nigeria.

Item	Response	
	Knowledgeable	Not knowledgeable
Physical activity is any form of physical exertion	286	14
Exercise/physical activity can enhance mother's health	299	1
Exercise/physical activity helps to promote social activities	295	5
Physical activity should last for at least 30 min per day	288	12
At least physical activity should be done three (3) times per week	287	13
Increased duration and intensity of physical activity is beneficial to the body	290	10
Physical activity prevent high blood pressure	289	11
Physical activity prevents people from being Isolated	284	16
Physical activity prevents obesity	293	7
Physical activity prevents heart diseases	285	15
Physical activity is necessary to prevent diseases of the joints	295	5
Physical activity makes the bones to be strong	295	5
Exercise promotes appetite	287	13
Blood supply to the body is stimulated by physical activity	294	6
Physical activity reduces mental tension	289	11
Physical activity if not regularly done leads to body pains	272	28
Physical activity enhances general health	293	7
Physical activity prevents constipation	282	18
Physical activity prevents the formation of kidney stones	277	23
Even when one is sick a level of physical activity is necessary	287	13
Watching television is not a means of physical activity	281	19
Total	6,048 (96%)	252 (4%)

Faculties not offering Physical and Health Education programme as a course of study were used. Ten departments were sampled from the six faculties selected, and 300 students randomly selected from these departments (30 from each department) were used as subjects of the study.

A validated questionnaire was used as research instrument to collate information from subjects of the study. Trial testing was also conducted to assess the reliability of the research instrument. A reliability coefficient (r) of 0.85 was arrived at after comparing the results of the two trial tests; this was considered well enough for the study.

Five graduate students of physical and health education were trained to serve as research assistants to collect data from subjects of the study. Simple descriptive statistical analysis such as tables and percentage were sued to analyze the data collected for the study.

RESULTS

One hundred and fifty nine (53%) of the respondents were males while the remaining one hundred and forty one (47%) were females. 83% of the respondents were between the ages of 21 and 35 while the remaining 17% were below the ages of 21. Two hundred and fifty eight (86%) of the students were singles, while 14% were married. 30% of the respondents were in their final year of study, 46% in third year, 15% in second year, while the remaining 9% were in the first year of study. Respondents who were from science-based departments were 39%, 15% come from social sciences, 46 from arts and humanities.

Twenty-one items (posers) were utilized to test the adequacy of the knowledge of students of tertiary institution in Cross River State on the benefits derivable from physical activities. Table 1 contains a detail assessment of the students' knowledge of the benefits of exercise. Ninety six percent of the respondents were knowledgeable on the benefits of physical exercise while 4% were not.

Table 2 contains information on the nature and level of physical activities the students are involved in. The majority of the respondents do no walk at least 2.8 km in 35 min per day; jog (59%); play football (53%), wash floor for at least 20 min or more, three times a week. Regarding what the respondents do as physical activity, 61.33% climb stair, dance (52%), shoot basket ball (62.33%), run (52.67%) and swim (60.33%) for the recommended periods. Generally, forty-six percent of the respondents participated in different physical exercise whereas 51% did not.

Respondents were asked to respond to the twelve-item posers. Table 3 contains their reactions to the issues raised regarding the barriers to participation in physical activity. 78% of the respondents attested lack of awareness on the benefits of physical activity as a barrier, while 87.33% claimed that they cannot participate

Table 2. Practice (participation) of exercise/physical activity by students in tertiary institutions in Cross River State, Nigeria.

Item	Response		
	Yes	No	No response
I take bike or taxi to school even when I live near the campus	84 (28)	213 (71)	3 (1)
I hate trekking because it is stressful	61 (20.33)	236 (78.66)	3 (1)
Intra campus transportation reduces my stress of trekking	212 (70.67)	81 (27)	7 (2.33)
I hate to take lectures upstairs because climbing is very stressful	75 (25)	216 (72)	9 (3)
I work at least 2.8 km in 35 min per day	131 (43.67)	161 (53.67)	8 (2.66)
I climb stairs for at least 15 min per day	184 (61.33)	113 (37.67)	3 (1)
I dance at least 30 min 3 times per week	156 (52)	140 (46.67)	4 (1.33)
I jog at least 30 min three times per week	116 (38.67)	177 (59)	22 (7.33)
I play football at least for 40 min 3 times in a week	138 (46)	159 (53)	3 (1.33)
I shoot basket in basket ball at least 30 min 3 times a day	187 (62.33)	108 (36)	5 (1.67)
I skip with rope at least for 15 min per day	149 (49.67)	123 (41)	28 (9.33)
I run 2.5 km in 15 min per day	158 (52.67)	135 (45)	7 (2.33)
I do swimming at least for 20 min 3 times per week	181 (60.33)	107 (35.67)	12 (4.00)
I wash floor for at least 40 to 60 min for at least 3 times per week	131 (43.67)	164 (54.67)	5 (1.66)
I watch television as a means of physical activity.	114 (38)	177 (59)	9 (3)
Total	2077 (46%)	2310 (51%)	104 (3%)

*Figures in parentheses are percentages.

in physical exercise. 77.33% of the respondents did not have the skill and 67.33% did not have money for transportation to appropriate facility; 67.33 were afraid of injury. Generally, the results showed that 61% accepted that the listed barriers hindered them from participating in physical exercise while 38% said it was untrue.

FINDINGS AND DISCUSSION

The general aim of the study was to ascertain the students' level of knowledge of benefits of physical activities on their health, their level of participation in physical activities as well as to identify barriers to physical activities, which can hinder achievement of optimum health in the new millennium. The result in Table 1 showed that a high percentage of the respondents were knowledgeable on the benefits of exercise against a small proportion who was not knowledgeable. These results may be related to the fact that Physical Education is taught as a subject from primary school to the junior secondary school level. These results support Katrina (2008) that university students exercised for health, maintenance of fitness, stress reduction enjoyment and feeling good.

Some of the benefits documented in literature include: increased efficiency of heart and lungs: increased muscle strength and endurance, maintenance of proper body weight, reduction of the risk of coronary heart diseases including psychological and social benefits (Kozier et al., 2004; Ntui, 2000; McGlynn, 1997; Ajala, 2005). The knowledge on the benefits of exercise is important because lack of knowledge portends doom. According to Ajala (2005), to change your own behaviour you must know what to do (knowledgeable). Therefore, students having good knowledge of the benefits of physical activities (exercise) implies that there is a positive step towards active life style.

Table 2 shows students in Cross River State Tertiary institutions participation in exercise (physical activity). The result indicated that the level of participation was 46% against 51%. Majority of the respondents do not walk, jog, play football, wash floor for at least 20 min or more, three times in a week. These results may be related to lack of scheduled time for these activities as part of the university programme. Students need time, less school work, more motivation, fewer commitment and training for physical activity as revealed in Katrina (2008)'s study. Regarding what the students do as physical activity, majority of the students climb stairs, dance, run, and swim for the recommended periods. Some of these results may be related to the fact that some of the lecture rooms are upstairs and most of the students run in order to get a seat since most of the lecture halls do not have enough seats. Secondly, dancing is a form of recreation and involves physical activity and most Nigerians enjoy it. The general level of participation in physical activity is low if students are to benefit from physical activities. Nigerians have not imbibed the culture of regular physical activity; therefore, if our youths are to be encouraged lecturers, administrators and others who are involved in moulding the students need to show good example by engaging in exercise.

Table 3. Barriers to participation in exercise (physical activity) among students of tertiary institutions in Cross River State, Nigeria.

Items	Response		
	True	Untrue	No response
I am not aware that physical activity is essential to health	234 (78)	62 (20.67)	4 (1.33)
I do not want to be injured	150 (50)	146 (48.67)	4 (1.33)
There are no guaranteed safety	139 (46.33)	154 (51.34)	7 (2.33)
I want to avoid health problems that can arise from exercise	177 (59)	121 (40.33)	2 (0.67)
I don't think I can do exercise at all.	262 (87.33)	36 (12)	2 (0.67)
I do not have money to transport myself to the stadium	202 (67.33)	96 (32)	2 (0.67)
There are no facilities for exercise in the campus	176 (58.66)	117 (39)	7 (2.33)
There are no professionals to design the programme	174 (58)	124 (41.33)	2 (2.33)
There is no time	138 (46)	159 (53)	3 (1)
There is no encouragement from the school authorities	147 (49)	151 (50.33)	2 (0.67)
I do not have the skill to perform physical activities	232 (77.33)	66 (22)	2 (0.67)
It is very costly to enroll in structured or planned physical activity	170 ()	128 ()	2 (0.67)
Total	2201 (61%)	1360 (38%)	39 (1%)

*Figures in parentheses are percentages.

The result in Table 3 shows that lack of awareness was seen as a barrier to participation in physical activity. This may be related to the negative wording of the item on the questionnaire. The results of this study had attested to high knowledge on the benefits of physical exercise. Majority of the respondents also lacked confidence to engage in physical activity, lacked skill and would not like to be injured during physical activity. This may be related to lack of regular practice. Laziness, lack of motivation, lack of social support, and other priorities have been identified as barriers to university students' participation in physical activity (Katrina, 2008; Society for the Advancement of Education, 2001).

CONCLUSION AND RECOMMENDATIONS

The importance of exercise or physical activity in maintaining physical, psychological and social health cannot be overemphasized. Students need to be knowledgeable and also participate in exercise to derive the known benefits. In this study, it was concluded that students were knowledgeable about the benefit of exercise, the level of participation was low and the level of barriers identified by students was high.

Based on the findings in this study, it is recommended that:

i) Regular sporting activities should be held between faculties, departments and others.
ii) Facilities and equipment should be provided for physical activity.
iii) Time should be created for students to participate in exercise.
iv) Students should be encouraged to walk as a way of life.

Conflict of Interests

The authors have not declared any conflict of interests.

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