Physical Exercise: Knowledge, attitude and participation of senior secondary school students of selected private schools in Ibadan North Local Government Area, Oyo State (Nigeria)

Ćwiczenie fizyczne: Wiedza, postawa i uczestnictwo uczniów wybranych prywatnych szkół średnich w Ibadan North Local Government Area, Oyo State (Nigeria)

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Summary

Background: Studies suggest that young adulthood is a critical time for physical exercise interventions. This study assessed knowledge, attitude and participation in physical exercise by students of privately owned senior secondary schools in Ibadan North East Local Government Area, Ibadan, Oyo State, Nigeria.

Materials and methods: This study is a cross sectional survey. Informed consent was obtained from the schools and individual participants. Multi-stage sampling technique was used in selecting participants for the study. Each participant was guided in completing the questionnaire. Data on knowledge, attitude and participation in physical exercise were obtained from students. Data were analyzed using frequency, percentages and chi square test.

Results: Five hundred and sixty questionnaires were administered to respondents and 520 (92.9%) were completed and returned. Out of the 520 participants 258 (49.62%) were males and 262 (50.38%) were females. Out of 520 participants, 97.88% had good knowledge about physical exercise (49.23% males and 48.65% females). Out of 520 participants, 410 (78.85%) had good attitude towards physical exercise (40.96% males and 37.89% females). Male participants were better in knowledge and attitude than female participants. Participation in physical exercise was poor because participants were not putting in enough time into physical exercise.

Conclusions: Boys had better knowledge about physical exercise and better attitude to physical exercise than girls. Girls actually participate more in physical exercise, though both boys and girls were not putting in enough time into participating in physical exercise. School curriculum that will encourage physical exercise should be adopted with more time allocated for physical exercises.

Keywords: knowledge, attitude, participation, physical exercise, gender

Introduction

Physical exercise is any planned activity of the body that enhances or maintains physical fitness or overall health [1]. It could be performed for various reasons which include muscle strengthening, improving cardiovascular system function, improving athletic skills, weight loss and maintenance or as a tool for enjoyment. Frequent and regular physical exercise boosts the immune system, and helps in preventing heart diseases, cardiovascular diseases, type 2 diabetes and obesity [2].

The World Health Organization (WHO) defined health as a state of complete physical, mental and social well being and not merely the absence of disease or infirmity. The constitution further recognized "the enjoyment of the highest attainable standard of health as one of the fundamental rights of every human being [3]. A more recent definition states that health is a condition of well-being, free of disease or infirmity and a basic universal human right [4].

Health problems associated with obesity and physical inactivity are widely acknowledged and over the past 50 years have become a serious public health concern [5]. Various interventions have been implemented at all levels of society such as family, school, community to address health problems associated with

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physical inactivity [6–8] data still indicate that significant declines in obesity and increases in physical activity remain to be seen [9]. It is important to point out that mastering of student health-related fitness knowledge has constantly emerged as one of the important areas that needs improvement [10, 11].

It has been realized that physical activity interventions are needed at all age groups [12]. Studies suggested that young adulthood is a critical time for physical exercise interventions due to carry-over effects of physical activity patterns which may last for a lifetime [13, 14]. The importance of physical activity knowledge to physical activity engagement lies in its relationship with the attitude component in the theory of planned behavior. Specifically, knowledge has an impact on attitudes, which in turn influence intentions toward behavior. According to the theory of planned behavior, an individuals' intention to participate in physical activity is the immediate predictor of physical activity.

It has been suggested that knowledge of physical activity and its health benefits is the foundation for people to engage in more physical activity [15, 16], hence improving and developing mastery of health related fitness knowledge might be the first step to the establishment of healthy physical activity behaviors [11, 17, 18].

According to the study involving lecturers in the University of Ibadan, Oyo State, Nigeria, it was concluded that the lecturers involved in the study were not knowledgeable enough about the benefits of exercise; had fair attitude towards exercise, and had a low level of participation in physical exercise [19]. In another study conducted on white collar workers in Ibadan South West Local Government Area of Oyo State, Nigeria, it was concluded that majority of the participants had good knowledge about physical exercise and its benefits but still their participation in physical exercise was low [20]. In the study conducted in a large U.S. Southern State University on health-related fitness knowledge and its relation to student physical activity patterns, it was found that most students did not have mastery of an adequate amount of health-related fitness knowledge. In addition, student health-related fitness knowledge and physical activity did not change significantly as their age at the university increased, indicating that the university has not been able to physically educate the students well [21]. There seems to be no policies, specifications or recommendations by the Nigerian government on exercise for citizens' health promotion and disease prevention. There also appears to be limited published studies and literature on the knowledge, attitudes of Nigerians relating to exercise [20]. This study aims to investigate the knowledge, attitude and level of participation in physical exercise among senior secondary school students of selected private secondary schools in Ibadan, Oyo State, Nigeria.

Materials and methods

Procedure

This is a cross-sectional survey on knowledge, attitude and level of participation in physical exercise among senior secondary school students of selected approved private secondary schools in Ibadan North Local Government Area. Ethical approval was obtained from UI/UCH Research Ethics Committee. Approval was obtained from principals and class teachers in the selected schools. A letter stating the purpose of the study, assuring students confidentiality and obtaining informed consent was distributed with the questionnaires to participants. Participants were guided in completing the questionnaires correctly and the questionnaires were collected immediately after completion.

Participants

Five hundred and sixty questionnaires were administered to respondents and 520 were completed and returned. Out of the 520 participants 258 (49.62 %) were males and 262 (50.38 %) were females. All participants are senior secondary school students from approved private secondary schools in Ibadan.

Instruments

The instrument used for this study is a 4 section questionnaire with 33 items. This instrument was adapted from Oyewo (2009). The four (4) sections are as follows:

Section A: This contains 4 questions requesting for socio-demographic information such as age, sex, class of study and name of school of the individual.

Section B: This section has 10 questions testing respondents' knowledge of the beneficial effects of exercise.

Section C: This contains 10 questions investigating respondents' attitude towards exercise.

Section D: This section has 9 questions investigating respondents' participation in exercise.

Data Analysis: All data collected were analyzed with descriptive statistics of frequency and percentages. Chi-square test was used to determine the association between gender, class and knowledge and attitude. Level of significance was set at $p < 0.05$.

Results

Demographic Characteristics of respondents

Out of the 520 participants 258 (49.62 %) were males and 262 (50.38 %) were females. Out of 520 participants, 97.88% had good knowledge about physical exercise (49.23% males and 48.65% females). Out of 520 participants, 410 (78.85%) had good attitude towards physical exercise (40.96% males and 37.89% females).

Tabela 1.

Participants response to Knowledge items

Variable	Response		
	yes n(%)	no n(%)	don't know n(%)
General knowledge about exercise Exercise is necessary to maintain good health	512(98.5)	6(1.1)	2(0.4)
Exercise does more harm than good	54(10.3)	430(82.7)	35(7.0)
Washing and other house chores are sufficient to maintain good health	158(30.5)	270(52.0)	92(17.5)
Exercise can be aerobic or anaerobic	283(54.4)	76(14.7)	161(30.9)
Aerobic exercise include jogging, swimming, biking, running and brisk walking	378(72.6)	41(7.9)	101(19.5)
Exercise should be done continually throughout life for good health	448(86.2)	38(7.4)	34(6.4)
Slimming tea and other drugs could be used in place of exercise to achieve the same effect	105(20.2)	340(65.4)	75(14.4)
Benefits of regular exercises include Increasing and maintaining flexibility	476(91.5)	20(3.9)	24(4.6)
Increasing and maintaining muscular strength and endurance	499(96.0)	15(2.8)	6(1.2)
Maintain a normal blood pressure range	490(90.1)	19(3.5)	32(6.4)

Tabela 2.

Participants Response to Attitude Items

Variable	Responses				
	SA	A	UND	DIS	STRDIS
I feel that my regular work is an adequate substitute for regular exercise	91(17.3)	159(30.5)	82(15.8)	106(20.4)	83(16.0)
I need someone to keep reminding me to exercise	69(13.2)	107(20.6)	57(11.0)	154(29.8)	132(25.4)
I use little pain from previous exercises or being tired as excuse to keep away from further exercises	71(13.6)	98(18.9)	71(15.5)	80(23.5)	148(28.5)
I feel that exercise takes away most of my energy	49(9.4)	98(18.8)	60(11.6)	156(30.1)	156(30.1)
I look forward to exercising each day	225(43.2)	98(18.8)	143(27.5)	43(8.3)	11(2.2)
Even without company, I exercise regularly	141(27.2)	194(37.3)	70(13.4)	76(14.7)	38(7.4)
I feel that I have no time of my own and daily exercises take away my valuable time	59(11.4)	86(16.5)	89(17.1)	156(30.0)	30(25.0)
I give up on exercising owing to a difficulty of sticking to a schedule	93(17.8)	124(23.9)	129(24.9)	98(18.9)	75(14.5)
Doing regular exercise is good for my fitness and health	395(75.9)	87(16.7)	31(6.0)	4(0.7)	4(0.7)
I should exercise regularly for my health	358(68.8)	129(24.8)	21(4.0)	9(1.7)	4(0.7)

Key: SA = strongly agree; A = agree; UND = undecided; DIS = disagree; STRDIS = strongly disagree

Tabela 3.

Knowledge and attitude about exercise and its benefits on respondents by Gender and class of study

			Total	df	X^2	p value
KNOWLEDGE Gender						
Gender	Poor knowledge	Good knowledge		2	7.745	0.021
Male	2(0.8)	256(99.2)	258(100)			
Female	9(3.4)	253(96.6)	362(100)			
Class						
Class	Poor Knowledge	Good Knowledge		3	9.308	0.025
SS1	4(3.3)	117(96.7)	121(100)			
SS2	4(1.3)	293(98.7)	297(100)			
SS3	2(1.5)	94(97.8)	96(100)			
ATTITUDE Gender						
Gender	Bad attitude	Good attitude		2	7.715	0.021
Male	45(17.4)	213(82.6)	258(100)			
Female	65(24.8)	197(75.2)	262(100)			
Level of Study						
Level of Study	Bad attitude	Good attitude		3	9.308	0.25
SS1	4(3.3)	117(96.7)	121(100)			
SS2	4(1.3)	293(98.7)	297(100)			
SS3	2(2.1)	94(97.9)	96(100)			

Discussion

The participants in this study were teenagers between age 13 and 19 years. There were more female participants than the males in this study. The participants in the study were in senior secondary schools 1–3. There was the least number of participating students from the Senior Secondary School 3 and this could be attributed to the fact that they were preparing to sit for their National Examination Council (NECO) examinations at the time of this study and were not available to participate.

A very high proportion of the students had good knowledge of exercise and its benefits to their health. Five hundred and thirty six (98.5%) respondents knew that exercise was necessary to maintain good health. The ratio of students with good knowledge to students with poor knowledge is 531:13 respectively. This result is in line with the findings of Oyewo [20] where 91.2% of the workers that made up the population of the study also knew that exercise is necessary to maintain good health. Considering the students' knowledge of the benefits of exercise, it was observed that majority of them also had good knowledge with 91.5% of the participants conceding to the fact that the benefits of exercise include increasing and maintaining flexibility and 96.0% attesting that another benefit is that exercise increases and maintains muscular strength and endurance. This is also in line with the findings of Oyewo [20] where 81.1% agreed with the latter statement and Aderibigbe [22] where 85.4% agreed with the former. Also the study carried out in Dubai reached the conclusion that the knowledge of the beneficial effect of physical exercise as a preventive measure against ill-health in general was high among students and further states that this is a desirable situation that has to be maintained, developed and improved by well-concerted school health education schemes [23]. The result in this study showed that students had good knowledge of physical exercise and its benefits to health with male participants having better knowledge than the females. This is also in keeping with the findings of Oyewo [20] which showed that male participants had better knowledge about physical exercise. He put forward that this could be because males are more likely to be engaged in team sports than females which could create a channel for exchanging information about exercise and its benefits [20].

Significant association existed between class and knowledge of participants about physical exercise and its benefits. The SS2 and SS3 classes had better knowledge than SS1 class and this could very be attributed to the fact that they had spent longer period in the schools and therefore might have learnt more on exercise than the lower class. Oyewo [20] also found a significant association between workers educational level and their knowledge of physical exercise. Another study conducted in a large US Southern State University found a significant relationship between students' health related knowledge and the number of years the students had spent at the university [24].

The participants in this study generally had a good attitude to exercise. Despite this a greater proportion of participants (260 students) believed that exercise could be substituted by their regular work. This is in line with results observed by Aderibigbe [22] where working women in Ibadan North Local Government Area also had the same believe. The sum of percentages of those who agreed and strongly agreed that they need someone to keep reminding them to exercise is 33.8%. This is also in line with results reached by Bashorun [19] where 28.8% of lecturers at the University of Ibadan said they needed someone to keep reminding them to exercise. One hundred and fifty two participants claimed they had no time and exercising took away their valuable time. This is also true for the study carried out in a Turkish University on students where "lack of time due to busy lesson schedule" and "lack of time due to responsibilities related to the family and social environment" were most cited items for physical activity barriers faced by the students [25]. 78.7% agreed that they look forward to exercising each day and 64.5% said that even without company, they exercise regularly.

This study showed that male participants had better attitude towards exercise than female participants. It could also be as a result of the increasing desire of the male gender for muscular body shapes. This is backed up by a study that found that formation of attitudes about body image begins early in life [26].

In the study conducted in United States of America in a high school, it was observed that among black students, the prevalence of being enrolled in physical exercise and health (PHE) class declined significantly between 1991 and 1997 [27]. Overall, the prevalence of attending PHE class daily declined significantly from 1991 (41.6%) to 1995 (25.4%). In 2003, only 55.7% of high school students were enrolled in a PHE class, only 28.4% was attending PE class daily, and only 39.2% were physically active during PHE class [27].

Despite the fact that it was previously mentioned that the respondents had had good knowledge about exercise, their participation was found to be at minimal levels hence there is a need for more work to be done in getting students to participate in vigorous intensity physical activities which has been found to be more beneficial than moderate intensity activities [28]. A high proportion of participants were found to engage in moderate intensity activities. This is consistent with the findings of Taha [23] where he concluded that the practice of moderate physical exercise was reported by high proportions of both male and female students. Analysis done on walking habit of students in this study also revealed that the more time for walking, the fewer respondents admitted to walking. Vehicles and motorbikes are the means by which individuals move from one place to another, thus reducing walking time of students. This technological advances and conveniences have made life easier and less active, preventing people from becoming physically active [29].

Conclusion

The results of this study showed that students have an impressive knowledge about exercise and its health benefits. A lot of concerted effort still needs to be applied in improving their participation in physical exercise

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Streszczenie

Wstęp: Badania sugerują, że młoda dorosłość jest krytycznym momentem dla interwencji fizycznych. W badaniu oceniano wiedzę, nastawienie i uczestnictwo w ćwiczeniach fizycznych uczniów prywatnych szkół średnich w Ibadan North East Local Government Area, Ibadan, Oyo State, Nigeria.

Materiał i metody: Niniejsze badanie jest badaniem przekrojowym. Od szkół i indywidualnych uczestników została uzyskana świadoma zgoda na udział w badaniach. Przy wyborze uczestników badania wykorzystano wielostopniową technikę próbkowania. Każdy uczestnik był prowadzony w wypełnianiu kwestionariusza. Dane dotyczące wiedzy, postawy i udziału w ćwiczeniach fizycznych uzyskano od uczniów. Dane analizowano stosując częstotliwość, procenty i test chi2.

Wyniki: Respondentom rozdano pięćset sześćdziesiąt kwestionariuszy, a 520 (92,9%) wypełniono i zwrócono. Z 520 uczestników 258 (49,62%) to mężczyźni, a 262 (50,38%) to kobiety. Spośród 520 uczestników 97,88% miało dobrą wiedzę na temat ćwiczeń fizycznych (49,23% mężczyzn i 48,65% kobiet). Z 520 uczestników 410 (78,85%) miało dobre nastawienie do ćwiczeń fizycznych (40,96% mężczyzn i 37,89% kobiet). Uczestnicy płci męskiej mieli lepszą wiedzę i postawę niż uczestnicy płci żeńskiej. Udział w ćwiczeniach fizycznych był słaby, ponieważ uczestnicy nie poświęcali wystarczająco dużo czasu na ćwiczenia fizyczne.

Wnioski: Chłopcy mieli lepszą wiedzę na temat ćwiczeń fizycznych i lepsze podejścia do ćwiczeń fizycznych niż dziewczęta. Dziewczęta w większym stopniu uczestniczyły w ćwiczeniach fizycznych, choć zarówno chłopcy, jak i dziewczęta nie poświęcali wystarczająco dużo czasu na ćwiczenia fizyczne. Program szkolny, który będzie zachęcał do ćwiczeń fizycznych, powinien zapewnić więcej czasu przeznaczonego na ćwiczenia fizyczne.

Słowa kluczowe: wiedza, postawa, uczestnictwo, ćwiczenia fizyczne i płeć