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LEVEL OF PHYSICAL ACTIVITY AMONG THE STUDENTS AT THE FACULTY OF MEDICINE WITHIN SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE

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Abstract

Physical activity reduces the risk of hypertension, cardiovascular diseases, diabetes and onset of depression. Proper and regular physical activity contributes to balancing body weight.

The objective of the paper is to ascertain the level of physical activity among the students at the Faculty of Medicine within Ss. Cyril and Methodius University in Skopje.

This research represents a descriptive-analytical study. A total of 316 students in the second and third year of studies at the Faculty of Medicine, Major General Medicine within Ss. Cyril and Methodius University in Skopje participated in the research.

In the course of one day, the duration of a moderately intense activity practiced by the students is less than 10 minutes and it amounts to 35.4%, i.e. is evident in 112 students. In the course of one week, students are engaged 2 days in some vigorously intense sports, fitness or recreational activity, i.e. 15.8% (50 students). In the course of one day, the duration of a vigorously intense activity practiced by students is less than 10 minutes and it amounts to 44.3%, i.e. is evident in 140 students.

The students are insufficiently physically active, i.e. the students do not observe the recommendations of the World Health Organization that stipulate that the practice of a moderately intense physical activity is to be at least 150 minutes per week, i.e. 75 minutes of a high intensity physical activity or an equivalent combination of a moderate and vigorous physical activity.

***Key words*:** physical activity, medical students, Faculty of Medicine, Ss. Cyril and Methodius University, Skopje

Introduction

Physical activity implies any body movement caused by the skeletal muscles that leads to burning of energy [1]. In the year 1985, Caspersen and associates set the definition of physical activity on the following three elements: body movement caused by the skeletal muscles, the total variable quantity of energy burnt, and which is in positive correlation with one's physical condition [2].

Physical activity is a process that is manifested through games, walking (hiking), household chores, recreational activities [3].

The intensity of the physical activity is to be in correlation with the general health condition of the individual. Physical activity is divided into vigorously intense physical activity and moderately intense physical activity. The vigorously intense activity causes rapid breathing and fast heart rate whereas the moderately intense physical activity causes slightly faster heart rate.

The global population practices a moderate and active lifestyle. Moderate activity represents a lifestyle that encompasses physical activity that is the equivalent to walking between 2,41 and 4,83 km a day including light physical activity related to typical lifestyle [4].

Active refers to a lifestyle that encompasses physical activity that is the equivalent of walking more than 4,83 km a day including any light physical activity related to any typical lifestyle [4].

In conformity with the recommendations of the World Health Organization, physical activity is essential and beneficial if practiced and adapted to the health capacities of each and every individual. In order to experience the positive effects of practicing any physical activity, at least 150 minutes of moderately intense physical activity, or a minimum of 75 minutes of vigorous physical activity are required on a weekly basis, or a certain combination of the two types of physical activity.

The recommended exercises are the ones that lead to toning of muscles which is feasible by working out two or three days a week.

Moderate physical activity is recommended for persons aged 18 to 64 years of age, five days a week or practicing intense type of exercises for at least 20 minutes, three times in the course of the week. The exercises that tone the muscles and improve the muscular stamina are to be practiced twice or three times a week, or are to be combined with aerobic exercises [5].

These 150 minutes of moderate physical activity may be realized over a number of days, for instance practicing moderately intense physical activity five times a week in the duration of 30 minutes each time [6].

In the course of a large representative cross-sectional study conducted among students in the Republic of Ireland, it was inferred that the students that are physically active feel healthier with regard to their physical and mental health, and are happier and more satisfied compared to their physically inactive peers [7].

The objective of the paper is to ascertain the level of physical activity among the students at the Faculty of Medicine within Ss. Cyril and Methodius University in Skopje.

Matherials and Methods

The paper represents a descriptive-analytical study. The research conducted in the year 2019 served as the basis for the drafting of the paper. A total of 316 students in the second and third year of studies at the Faculty of Medicine, Major General Medicine within Ss. Cyril and Methodius University in Skopje participated in the research.

The research was conducted by virtue of the surveying method, using a survey questionnaire. The research contributed to collecting information regarding the scope of physical activity among the students at the Faculty of Medicine within Ss. Cyril and Methodius University in Skopje.

The Global Physical Activity Questionnaire of the World Health Organization and the global research of adolescents' health were used for the purposes of this paper [8-9].

The Questionnaire consists of 33 questions and has been designed in such a manner so as to be appropriate to the respondents' age and gender. Both male and female respondents participated in the research. Due to the fact that the number of surveyed students has not been established pursuant to a statistical representativeness formula, it is a case of a so-called intended sample.

Statistical Analysis

For the purpose of the statistical analysis, respective statistical programs were used (Statistica for Windows 7,0 and SPSS version 14). The paper represents a descriptive-analytical study. And only descriptive statistics were used.

Results

In the research participated 96 (30.4%) male students and 220 (69,6%) female students in the second and third year of studies at the Faculty of Medicine, Major General Medicine within Ss. Cyril and Methodius University in Skopje.

The data obtained in the paper refers to the answers of male and female medical students. The data obtained from the conducted research indicate that the majority of students practice intensive sports, fitness or recreational activities, i.e. 61.7% (or a total of 195 students) gave a positive response to the question: 'Have you practiced any specific vigorously intense sports, fitness or recreational activity that caused rapid breathing or fast heart rate (jogging or football) in the duration of at least 10 minutes?'

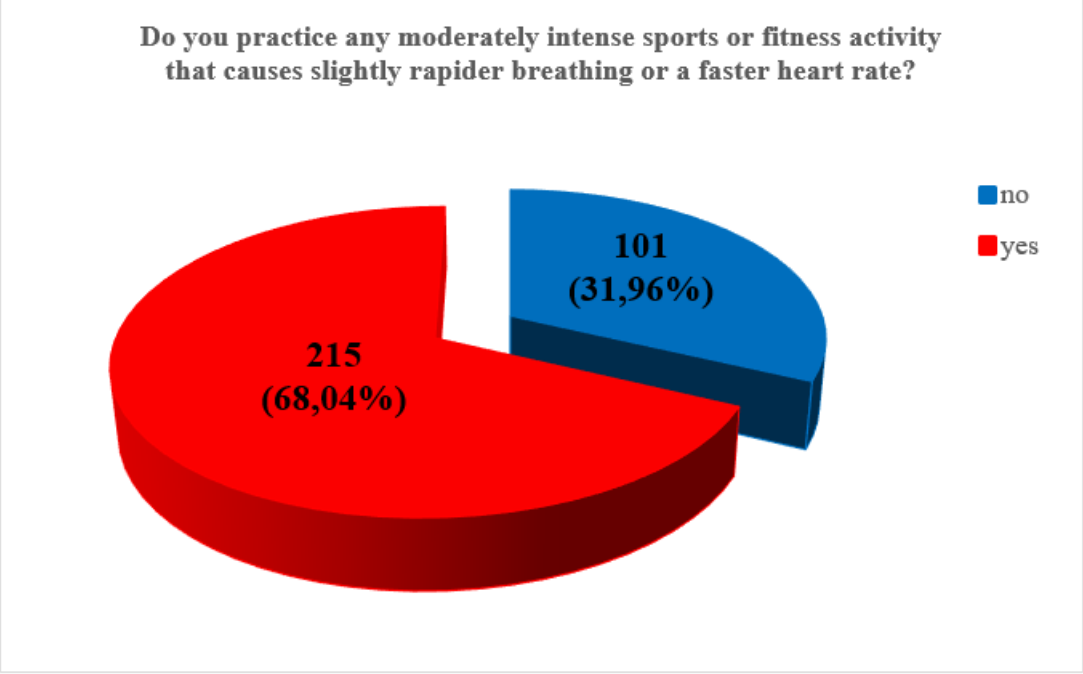
In the course of one week, 15.8% of the surveyed students were engaged in a certain vigorously intense sports, fitness or recreational activity for 2 days.

In the course of one day, 44.3%, i.e. a total of 140 students practice such an activity for less than 10 minutes.

Table 1. Number of days of practicing a vigorously intense sports, fitness or recreational activity

Question	n (%)
In a normal week, how many days are you engaged in a certain vigorously intense sports, fitness or recreational activity?	
0	98 (31.01)
1	45 (14.24)
2	50 (15.82)
3	39 (12.34)
4	37 (11.71)
5	30 (9.49)
6	5 (1.58)
7	12 (3.79)
How much time do you devote to the practice of a certain vigorously intense sports, fitness or recreational activity on a normal day?	
Less than 10 minutes a day	140 (44.3)
10 to 19 minutes a day	67 (21.2)
20 to 29 minutes a day	37 (11.71)
30 and more minutes a day	72 (22.78)

As regards the moderately intense physical activity, the major percentage of students, i.e. 68%, or a total of 215 students, declared that they practice certain moderate sports, fitness or recreational activity, such as fast walking, riding a bicycle, swimming, playing volleyball for at least 10 minutes.



Graph 1. Number of students that practice a moderately intense physical activity

In the course of one week, students are engaged in a moderately intense sports, fitness or recreational activity 3 or 2 days, which is evident in 16.8% of the respondents, i.e. in 15.8% or 50 students, respectively. In the course of one day, 35.4%, i.e. a total of 112 students practice such an activity for less than 10 minutes.

Table 2. Days of practicing a certain moderately intense sports, fitness or recreational activity

Question	n (%)
In the course of one normal week, how many days are you engaged in a moderately intense sports, fitness or recreational activity?	
0	82 (25.95)
1	18 (5.69)
2	50 (15.82)
3	53 (16.77)
4	32 (10.13)
5	26 (8.23)
6	7 (2.21)
7	48 (15.19)
How much time do you devote to the practice of a certain moderately intense sports, fitness or recreational activity on a normal day?	
Less than 10 minutes a day	112 (35.44)
10 to 19 minutes a day	90 (28.48)
20 to 29 minutes a day	65 (20.57)
30 and more minutes a day	49 (15.51)

Discussion

Most of the respondents that participated in our research stated that they practice certain vigorously intense sports, fitness or recreational activity that causes rapid breathing or fast heart rate for a period of at least 10 minutes. 15.8%, or a total of 50 students practice such an activity twice a week.

To the question of how many days they are engaged in a certain vigorously intense sports, fitness or recreational activity, 31.01% of the surveyed students responded that they are not physically active on any day of the week. As to the time devoted to such an activity, 44.3%, i.e. a total of 140 students stated that the duration is less than 10 minutes a day.

With reference to the practice of a moderately intense sports, fitness or recreational activity in the course of one week, 16.8% of the respondents, i.e. 15.8% or a total of 50 students practice 3 or 2 days a week respectively. In the course of one day, 35.4%, i.e. a total of 112 students practice such an activity for less than 10 minutes. To the question of how many days the students are engaged in a moderately intense physical activity, 25.95% of the surveyed students stated that they are not physically active on any day of the week. On the other hand, in the course of a large-scale research conducted among students in the Republic of Ireland, the data collected indicated that only 27,5% of the surveyed students were engaged in certain moderately intense physical activities [7].

In the course of the same research, it was inferred that approximately a third of the respondents, i.e. 31.8% of the respondents had not undertaken any steps so as to be more physically active thus promoting their own health [7].

In the course of another research conducted in the year 2015 at the University of Medicine and Pharmacy in the Republic of Romania with a total number of 334 students as respondents, it was indicated that the students were of normal weight and that the male students were more physically active compared to the female students [10].

The research derived results revealed that the students of both genders demonstrated a high level of awareness concerning their health and their healthy and active lifestyle [10].

In the another research conducted in the year 2016/2017 during spring semester at the University of Belgrade in the Republic of Serbia a total of 4019 students from first, second, third and students of the fourth year of the studies paricipated. Of all the students who participated in the research, were studying sociohumanistic sciences, technical-technological sciences, medical sciences, and natural-mathematical sciences.

The results of this research showed that students of fourth year were in average more high active than students from first and second year, during the day.

On the other hand, students from second year spent significantly more time during the day in sedentary behavior, than to fourth year students. Male students were more high and moderate active than female students. But the most sedentary students were female students of the third year of medical sciences [11].

We can notice that students from the Faculty of Medicine who participated in our research and also the students from Faculty of Medicine in the research at the University of Belgrade are insufficiently physically active.

Regular physical activity is one of the superior factors that enable young persons and people of all ages in general to promote and safeguard their health. The practicing of any physical activity has a significant effect on the process of healthy ageing, contributes to an increased number of days in good health and wellbeing, reduces the risk of outbreak of an infectious disease and prevents any premature fatality [12].

Due to the physical inactivity in global terms referring to a population of 10 million people, out of whom a significant half are insufficiently physically active, the total annual costs arising from an insufficient physical activity amount to 910 million Euros. In global terms, the physical inactivity related costs amount to 54 billion dollars and additional 14 billion dollars with regard to lost productivity. Additionally, 1-3% of the total healthcare costs are prescribed to physical inactivity [13].

One of the issues arising from physical inactivity is the lost years of life in the course of one year. Pursuant to the data available from the WHO pertaining to the European region, 8,3 million years of lost life have been recorded due to the insufficient level of physical activity [14].

The American Centers for Disease Control and Prevention – CDC is at the forefront of the initiative to stimulate some 27 million Americans to become more physically active by the year 2027. The increase in the number of physically active people shall contribute to promoting health, quality of life and reducing any healthcare related costs. The other benefits with reference to the increased number in physically active people refer to boosting the secondary and university students' academic performance. Physically active persons may provide support to local communities, may contribute to reduction in air pollution and may create cohesive communities [15].

Conclusion

The students at the Faculty of Medicine within Ss. Cyril and Methodius University in Skopje are insufficiently physically active. A big percentage of the surveyed students responded that they did not practice any moderately intense physical exercise or any vigorously intense physical activity on any day of the week.

They do not adhere to the recommendations of the World Health Organization that highlight the necessity of practicing any moderately intense physical activity five days a week or practicing vigorously intense exercises for at least 20 minutes three times a week.

Being physically active is very important for each person, especially for young people and students who spend a lot of time on sedentary behavior because of studying several hours a day and faculty responsibilities as well. Physical activity has a great impact on our physical and mental health. For that reason it is very important to improve health education in relation to physical activity between students during the university education. It is necessary to have more classes at least 3 times a week for phisical activity, fitness and sport in the educational program.

Also it is important working on a better and higher quality realization of the Sport and Health subject. Involvement and making cooperation with great professors and experts from sport, medical sciences, nutrition and public health area is always one of the main factors for promoting health, healthy lifestyle, phisycal activity, and sport between young people and students.

On the other hand, making a public events, webinars and lectures about phisycal activity, fitness, sport and healthy lifestyle from the famous and success people and athletes who practice a healthy lifestyle as well, will contribute to additional motivation to increase practicing of physical activity among young people and students.

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