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Special aspects of movement activity of secondary general school pupils at 15–17 years of age in their spare time

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Purpose: *to determine the characteristics movement activity, which is carried out secondary general school pupils at 15–17 years of age in their spare time.*

Material & Methods *study involved secondary general school pupils of 10–11 classes in Lviv, Ternopil, Ivano-Frankivsk and Khmelnytsky. The total number of students was 926 people, which is 6% of the total population. The study used such methods: analysis and synthesis, analysis of scientific and methodological literature, sociological survey.*

Results: *specificity of movement activity in spare time is determined, which is carried out by pupils of senior school age. Defined amount of daily and weekly movement activity, as well as the main priorities in the choice of forms and types of movement activity.*

Conclusion: *results of the study will be used to develop a model for optimizing the movement activity of secondary general school pupils at 15–17 years of age using the appropriate forms of movement activity, which is carried out in their spare time.*

Keywords: *movement activity, secondary general school, spare time, pupils.*

Introduction

The sphere of leisure at all times has been and remains one of the weighty components of human life. That is why the problem of spare time organization has always been in the focus of scientists [3].

Spare time is an important means of forming the personality of a young person, contributes to the processes of recovery of mental and physical performance [5]. The period of spare time is aimed at fulfilling a number of functions, in particular, the function of developing abilities and realizing the interests of the individual, the functions of entertainment, recreation and social function. In this context, an important component of leisure activity is movement activity, as an integral part of the rational lifestyle of the individual, especially school-age children. Movement activity is aimed at promoting health, developing physical potential and achieving physical perfection [6].

The period of study in grades 10-11 is characterized by an increased level of academic load, which is usually not limited to compulsory school lessons. Preparation for final exams and external independent evaluation reduces the amount of spare time that students can spend on other activities, including movement activity [4].

Finding ways to increase the level of movement activity students of secondary schools will inevitably lead to an analysis of the scope of their leisure time, as a potential reserve of the effective application of the various forms of physical education.

Movement activity of various population groups is a constant object of research among scientists, since it has a close connection with the level of health and quality of life of the individual [8]. The scientific works of this subject cover the age periods, beginning with the pre-school age [7].

V. G. Arefev investigated the influence of movement activity on the health of schoolchildren, as well as the relationship between movement activity and the development of risk factors for chronic diseases [1]. A similar contingent was investigated by A. T. Tomenko, analyzed the daily level of movement activity of schoolchildren, comparing it with the existing norms. In addition, the author studied the problems of the movement activity of students, analyzing its relationship with the level of somatic health [9].

I. R. Bodnar has established age and gender characteristics in favorite leisure activities for schoolchildren of secondary school age [2].

Despite the fact that the level of movement activity of schoolchildren is systematically investigated by scientists, the peculiarities of the movement activity of schoolchildren in their spare time have been little studied or are considered in the context of analysis of other problems. At a time when the school system of education, by virtue of its standardization, does not adequately meet the biological need of the organism for movement activity, the sphere of spare time arises as a reserve for the potential increase in the level of movement activity and the prevention of hypodynamia. This determined the choice of the research objective.

The purpose of the research

To determine the characteristics movement activity, which is

carried out secondary general school pupils at 15–17 years of age in their spare time.

Objectives of the study:

1. Identify the amount of physical activity students 10–11 classes of secondary schools.

2. Set the forms and types of physical activity undertaken by students aged 15–17 years in his spare time.

Material and Methods of the research

Study involved secondary general school pupils of 10–11 classes in Lviv, Ternopil, Ivano-Frankivsk and Khmelnytsky. The total number of students was 926 people, which is 6% of the total population.

The study used such methods: analysis and synthesis, analysis of scientific and methodological literature, sociological survey.

Results of the research and their discussion

The classical approach to the analysis of human movement activity is, first of all, determining the level of this activity (daily, weekly, during the month, etc.). To do this, apply a variety of approaches, among them: a survey, the calculation of the level of movement activity using special techniques, the use of pedometers or fitness-trackers. Determine the level of movement activity is also possible with modern gadgets that track the movement of a person with the help of a satellite. Each of these methods has its own preferences and shortcomings, which to some extent can affect the reliability of the data obtained. In this study, a sociological survey method was used that allowed us to reach a significant group of respondents from different cities of Ukraine. The sample at the level of 6% of the population allowed to obtain data with an error of less than 4%. When formulating the questions, the approaches taken to determine the level of movement activity of children in some European countries, the United States and WHO [12].

The American Heart Association for prevention of health problems during schooling recommends daily movement activity of at least 30 min [10].

An analysis of the answers to the questions concerning the day and week volume of the movement activity of pupils of the 10th–11th grades made it possible to find out how often pupils aged 15–17 are engaged in movement activity lasting not less than 30 min during the week (Fig. 1).

As can be seen from the figure, three times a week or more often engage in movement activity lasting 30 minutes and more than 75,5% of students, 40,6% of them do it daily. At the same time, we note differences in the results obtained with respect to daily movement activity: among girls this indicator was 35,1%, while among young men – 46,4%.

The data obtained also indicate that the movement activity of 25,5% of students is not systematic. In general, 30,3% of girls have movement activity lasting 30 minutes and no more than twice a week. Among young men, the same indicator is 18,4%. Despite this, we note a low level of involvement in the movement activity of girls.

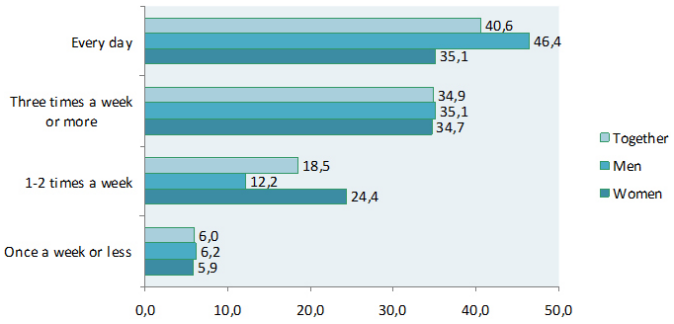

Fig. 1. Movement activity of students 15–17 years of age lasting 30 minutes or more during the week (%)

In the course of the survey, we used a different approach to determining the approximate weekly level of movement activity. Respondents responded to the question of the time spent on movement activity, the intensity of which causes shortness of breath or significant sweating. Note that this formulation is used in monitoring the level of movement activity in different countries by the World Health Organization [11]. The results are shown in Fig. 2.

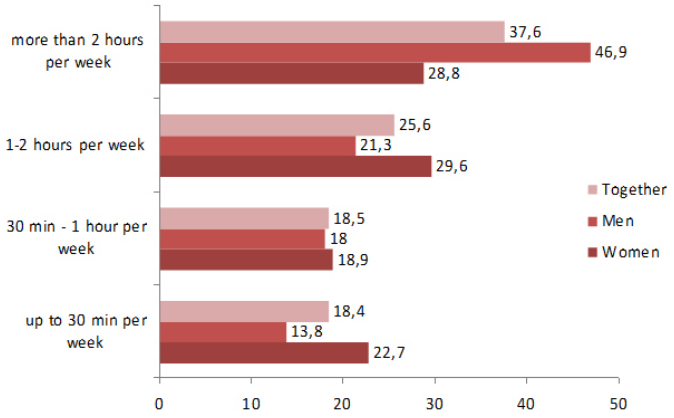

Fig. 2. Movement activity of students 15–17 years of age (%)

Based on the data obtained, it is found that 37,6% of students aged 15–17 spend on movement activity of high intensity more than 2 hours per week. Among young men, this indicator was significantly larger and amounted to 46,9%, while among girls it was at the level of 28,8%. The difference in rates between young men and girls was 18,1%.

Less was the difference in the rates of responses received among respondents who spend on high-intensity movement activity from 1 to 2 hours per week. These figures were 21,3% among young men and 29,6% among girls. The overall indicator was 25,6%.

The time for movement activity of high intensity from 30 minutes to 1 hour per week was declared by only 18,5% of respondents. Difference between the responses of girls and boys was not significant and amounted to 0,9%.

A similar indicator with a time expenditure of up to 30 minutes per week was 18,4%. In this case, there was a difference in gender-based responses: among young men the figure was 13,8%, among girls – 22,7%, the difference in indices was 8,9%.

An uncomplicated analysis allows us to state that in general 36.9% of secondary general school pupils at 15–17 years of age spend on movement activity of high intensity not more than 1 hour per week. The cumulative index of students who spend on such activity is not more than 2 hours per week, is 62,5%. At the same time among girls this indicator reaches the level of 71,2%, whereas among young men it is 53,6%.

The obtained data show that children, whose intensive movement activity is not more than 2 hours per week, are not involved in systematic training of health-training orientation. It can be concluded that a significant proportion of students in the 10–11 grades do not attend the sections and circles of the sports and sports area, or such forms of physical education do not provide the proper level of movement activity. In this context, we recall the well-known axiom about the need for at least 3 training sessions a week to achieve a positive impact on the development of the child's body.

At the second stage of the study, the most common forms of movement activity among the specified group of children were determined. Students were asked to answer this question: "In what way do you usually engage in movement activity in your spare time?". The results are shown in Fig. 3.

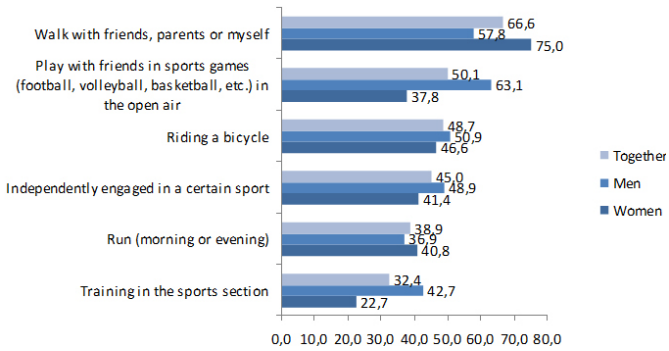

Fig. 3. Forms of embodiment of movement activity by students 15–17 years old in his spare time

Analyzing respondents' answers, we should first of all note the marked differences in gender. So, the most common form of movement activity in their free time among girls were walks, which are carried out with friends, parents or independently. This was indicated by 75% of the surveyed girls. Among young men this form of movement activity was less popular, it was indicated by 57,8% of respondents. The overall indicator was 66,6% of the respondents.

Male respondents were the most popular form of movement activity in their spare time, defined "sports games in the fresh air". This option was chosen by 63,1% of respondents. Among the girls, the mentioned form of movement activity turned out to be only the fifth in popularity, having received 37,8%. The difference in the answers between young men and girls was 25,3%.

In general, three of the most popular recreational forms of movement activity among young men included: outdoor games (63,1%), walks (57,8%) and cycling (50,9%). Among the girls, the similar distribution was as follows: walks (75%), cycling (46,6%), and self-employment in certain sports (41,4%).

It should be noted that the implementation of these forms of movement activity may be hampered by unfavorable weather conditions, especially in the autumn-winter period, which, probably, will affect the systematic nature of their implementation.

An analysis of the response rate for the involvement of pupils of the 10–11th grades in the sports sections showed 32,4% of the participants, with such a gender distribution: 42,7% among young men and 22,7% among girls. Comparison of the obtained data with the data of the week level of the movement activity of high intensity of students aged 15–17 years shows that the obtained data, both in general and taking into gender account, differ at the level of statistical error. This fact, in our opinion, confirms the correctness of the data obtained and once again confirms that the majority of pupils of the senior school age are not involved in systematic movement activity.

The above data show that practically all forms of movement activity at leisure, not counting outdoor walks, imply the performance of movement actions using elements of certain sports. That is why it is important to establish what kinds of sports students of senior school age enjoy doing at their leisure. It should be noted that, in response to the so-called "open" questions, respondents indicated a total of 58 types of sports that they do in their spare time. The vast majority of the above options, while receiving an indicator of no higher 3%. The results obtained also showed certain differences in preferences among young men and women (table 1).

Among the male respondents in the top three most popular sports that are cultivated at leisure included football (42,2%), volleyball (19,1%) and basketball (12,4%). These data coincide with the results of common forms of movement activity at leisure, among which the young men called it games in the open air. In turn, the responses of the girls were distributed as follows: volleyball (22,7%), cycling (12,6%) and running (12,4%).

As can be seen from the table, almost 14% of young men and girls aged 15–17 years did not specify any sport that they regularly or occasionally engage in their spare time. Obviously, such students are likely not at all engaged in some kind of sport in their spare time.

Regarding the sports that were the most popular among students in the 10–11 grades, it is worth noting that they are usually the most common among the variational modules that are implemented as part of the curriculum at physical education classes in general schools. The popularity of these sports can be provided by the existing infrastructure, because the equipment of most sports grounds allows you to engage in these sports.

Conclusions

In general, 75.5% of secondary general school pupils at 15–17 years of age three times a week or more often engage in movement activity lasting not less than 30 min. Every day 40,6% of school pupils exercise this movement activity. Among girls this indicator is 35,1%, among young men – 46,4%.

It is established that 37,6% of students aged 15–17 spend on movement activity of high intensity for more than 2 hours a week. Among young men this figure is 46,9%, among girls – 28,8%.

Table 1

The most popular sports, which are engaged in the leisure, students 15–17 years old

Men			Women		
№	Type of sport	(%)	№	Type of sport	(%)
1.	Football	42,2	1.	Volleyball	22,7
2.	Volleyball	19,1	2.	Not specified us one	13,9
3.	Not specified us one	13,8	3.	Cycling	12,6
4.	Basketball	12,4	4.	Running	12,4
5.	Cycling	9,6	5.	Football	12,0

The proportion of students aged 15–17 years who spend on movement activity of high intensity no more than 2 hours per week is 62,5%. Among girls this indicator reaches the level of 71,2%, among young men it is 53,6%.

The most popular forms of movement activity, which are carried out at leisure, among the young men there are: outdoor games (63,1%), walks (57,8%) and cycling (50,9%). Among the girls, the distribution of these forms was as follows: walks (75%), cycling (46,6%), and self-employment in certain sports (41,4%).

The most common kinds of sports that young men in the age of 15–17 prefer in their spare time are: football (42,2%), volleyball (19,1%) and basketball (12,4%). Girls aged 15–17 in their spare time are engaged in sports such as volleyball (22,7%) and cycling (12,6%). 12,4% of girls at leisure are engaged in running.

Prospects for further research in this direction

Further studies will be aimed at detailing the characteristics of movement activity in their spare time, taking into account not only the age and sex characteristics, but also the level of health of students in general education schools. In addition, the factors determining the movement activity of students in their spare time should be established, as well as the wishes of the children themselves regarding the desired forms of exercising such movement activity.

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