

MOTOR ACTIVITY IN THE INFORMATIONAL ENVIRONMENT OF HIGH-SCHOOL-AGE STUDENTS

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Abstract

The goal of the research is to reveal the main sources of information on motor activity that affect the information environment of high-school-age students. **Tasks of the study:** find out the frequency of obtaining the information about motor activity by high-school-age students; reveal the main sources from which the information about the motor activity is received by high-school-age students.

The survey was conducted among students of the 10th-11th forms of secondary schools in Lviv, Ternopil, Ivano-Frankivsk and Khmelnytsky. The total number of students was 925 (450 boys and 475 girls).

The frequency of receiving information on motor activity by 15–17-year-old students of secondary schools was determined. The main sources which provide high-school-age students with the information on the motor activity were revealed. The purpose of using one or another source of information by students of the 10th–11th forms was identified. The peculiarities of television and Internet content, which forms the information space of high-school-age students, are determined. The obtained results showed that the main amount of information that comes to students is entertaining one. The main sources of information about the motor activity for high-school-age students are the Internet, friends and peers. The survey data are interpreted taking into account the gender particularities of students.

Key words: motor activity, students, information, Internet.

Андрій Мандюк, Марта Ярошик, Ольга Рymar. Рухова активність в інформаційному середовищі учнів старшого шкільного віку. Мета дослідження – визначити основні джерела інформації про рухову активність, які впливають на інформаційне середовище учнів старшого шкільного віку. **Завдання статті** – виявити періодичність отримання інформації про рухову активність учнями старшого шкільного віку; установити основні джерела інформації, із яких отримують відомості про рухову активність учні старшого шкільного віку.

Проведено опитування учнів 10–11 класів загальноосвітніх шкіл міст Львова, Тернополя, Івано-Франківська та Хмельницького. Загальна кількість учнів – 925 осіб, із них 450 – це хлопці й 475 – дівчата.

Визначено періодичність, із якою отримують інформацію про рухову активність учні загальноосвітніх шкіл віком 15–17 років. Виявлені основні джерела, із яких до учнів старшого шкільного віку надходить інформація про рухову активність. Установлено, із якою метою учні 10–11 класів користуються тими чи іншими джерелами інформації. Визначено особливості телевізійного та інтернет контенту, який формує інформаційний простір учнів старшого шкільного віку. Отримані результати засвідчили, що основний об'єм інформації, який надходить до учнів, має розважальне спрямування. Основними джерелами інформації про рухову активність для дітей старшого шкільного віку, є мережа Інтернет, друзі та однолітки. Дані дослідження інтерпретовані з урахуванням гендерних особливостей школярів.

Ключові слова: рухова активність, школярі, інформація, Інтернет.

Андрей Мандюк, Марта Ярошик, Ольга Рymar. Двигательная активность в информационном пространстве учеников старшего школьного возраста. Цель исследования – определить основные источники информации о двигательной деятельности, которые влияют на информационную среду учеников старшего школьного возраста. **Задачи исследования** – определить периодичность получения информации о двигательной деятельности учениками старшего школьного возраста; установить основные источники информации, с которых получают ведомости о двигательной деятельности ученики старшего школьного возраста.

Проведен опрос учеников 10–11 классов общеобразовательных школ городов Львова, Тернополь, Ивано-Франковск и Хмельницкий. Общее количество учеников составило 925 чел., из них 450 – это мальчики и 475 – девочки.

Определена периодичность, с которой ученики общеобразовательных школ в возрасте 15–17 лет получают информацию о двигательной активности. Установлены основные источники, с которых получают информацию о двигательной активности ученики старшего школьного возраста. Определяется, с какой целью ученики 10–11 классов используют те или иные источники информации, а также особенности телевизионного и интернет контента, которые формируют информационное пространство учеников старшего школьного возраста. Полученные данные показали, что основной объём информации, который используют ученики, имеет развлекательную направленность.

Основными источниками информации о двигательной деятельности для учеников старшего школьного возраста являются сеть Интернет, друзья и сверстники. Данные исследования интерпретированы с учетом гендерных особенностей учеников.

Ключевые слова: двигательная активность, ученики, информация, Интернет.

Formulation of a Research Problem. According to the definition given in the free encyclopedia Wikipedia, the information environment is the world of information around a person and the world of his/her information-related activity.

Information environment of a person is formed by information and communication technologies, the relevance of which is growing in different spheres of life, and also contributes to socio-economic transformations [1]. Information and communication technologies cause and accelerate the processes of obtaining and production of knowledge, promote the modernization of education [10].

In 2003, only 14 % of young people (16 years and over) used cell phones, computers and the Internet. In 2014, more than 85 % of young people had mobile phones, 60 % used the Internet [1].

Modern society presents to the individual a number of requirements, which are usually accompanied by a reduction of free time, including a decrease in the ability to be engaged in motor activity. According to WHO, 1,9 million of deaths are caused worldwide by hypodynamia, and overweight and obesity cause at least 2,6 million deaths each year. The lifestyle of the population of Ukraine, in combination with the state of the sphere of physical culture and sports, caused a serious demographic crisis, which is a serious problem of national importance [4].

The above-mentioned negative factors did not bypass the educational process of secondary schools. The large amount of academic load of high school students leads to a systematic accumulation of fatigue, which negatively affects the overall state of their health [6].

The school does not fully solve the problem of meeting the children's biological need for movement. Physical education lessons only compensate for 15 % of the amount of motor activity necessary for the child's organism. About 60 % of the 10th–11th forms students are not involved in various forms of motor activity during extra-curricular time [2].

Among a number of negative factors that cause such a situation, one of the factors is the information environment of high-school-age students, which determines the priorities of activity of these children.

Today, the problems of physical education should be studied taking into account the requirements of the information society. The research of different approaches to the use of means and methods of physical education should be carried out taking into account such factors as increase of the amount of academic load, ineffective in terms of a healthy lifestyle, organization of the teaching and learning process, lack of motor activity among students of different age groups [4; 11].

Analysis of the Research Into this Problem. Analyzing the results of researches on the chosen subject, first of all, it is necessary to distinguish between the researches devoted to the study of various problems of motor activity and researches that examine the influence of information and communication technologies on modern society.

The problems of the deficit of motor activity of the young generation were considered by S. M. Futorny in his research paper «Formation of a healthy lifestyle of the young generation in the process of physical education». The author believes that the process of physical education should become an immune protective device for the preservation of an individual's health and contribute to the formation of a healthy lifestyle of the modern young generation [9].

Mykhailo Perehinets studied the problems of high school students motivation to organize the process of physical education in general education institutions of various types. The author also touched upon the problems of organization of the motor activity of students during a school day [7].

M. Y. Yaroshyk, investigating the structure and characteristics of the daily motor activity of students, found that specially organized motor activity is only 2% of the total amount of motor activity [12].

A. Roztoka, who discovered the relationship between a low level of motor activity and morphofunctional disorders in the children's bodies, studied the peculiarities of daily motor activity of schoolchildren of the 5th–6th forms [8].

Current research in the field of information and communication technologies and the possibility of their use in the educational process has become topical in modern science. In particular, Nataliya Oleksiuk [5] studied the possibility of using electronic social networks in social and pedagogical work with students.

To increase the effectiveness of perception of educational material related to motor activity and increase the level of motor activity of youth, N. Chukhlantseva suggests the use of active video games, whose feature is the physical movement of the gamer's body. With this research, the author shows the possibility of integrating modern information technologies into the process of physical education [10].

The problems of spending free time by students of different ages on activities related to using a computer or watching television programs are regularly studied abroad. The authors try to determine the structure of the free time of children of different ages and the place of various activities in it [13; 14].

Despite the fact that motor activity, as a subject of scientific research, is studied by many scientists, there is a lack of researches that examine a problem of motor activity from a perspective of information and communication technologies development. The problems of the place of physical culture and sport in the general information space of the individual are also poorly studied.

All mentioned above has determined the choice of the goal of the research. **The goal of the research** is to reveal the main sources of information on motor activity that affect the information environment of high-school-age students.

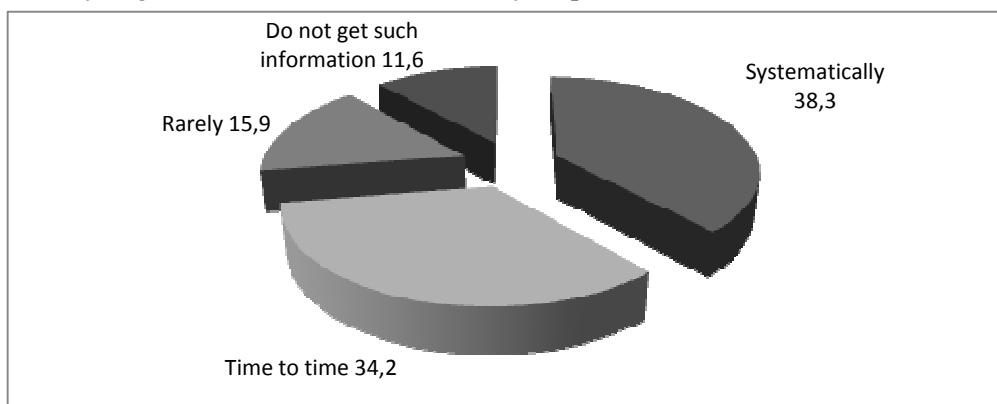
Methods of the Research. Methods of theoretical analysis and synthesis, analysis of scientific and methodological literature and a sociological survey were used in the research. The results of the two surveys are presented, the surveys were conducted among students of the 10th–11th forms of secondary schools in Lviv, Ternopil, Ivano–Frankivsk and Khmelnytsky. The questionnaires were developed by the author.

The first survey was carried out in order to reveal the regularity and main sources of information on the motor activity obtained by high-school-age students. The total number of interviewees was 926 (449 boys and 476 girls).

The goal of the second survey was to characterize the information environment formed by the main sources of information. 846 students took part in the second survey (420 boys, 426 girls).

In both studies, the sample was 6 % of the population. The error of the obtained data is $\pm 4\%$.

The results of the Research and Their Discussion. Determining the regularity with which the students of 10–11 forms receive information about motor activity, the respondents were asked to answer the question: «How often do you get information on motor activity?» (pic. 1).



Pic. 1. Regularity of Receiving Information on Motor Activity by High School Students (% , n = 925)

The obtained results showed that, in general, 38,3 % of high-school-age students systematically (once a week or more often) receive some information on the motor activity. From time to time (1–3 times a month) this information is received by 34,2 % of the surveyed students of the 10th–11th forms. Once a month or less, information on the motor activity is received by 15,9 % of students. In general, 11,6 % of high-school-age students do not receive information about various aspects of motor activity.

Having carried out a simple mathematical calculation, one can see that, in general, 61,7 % of high-school-age students do not regularly receive information about motor activity. This indicates that such information does not reach them even at the physical culture lesson, which is compulsory and formally must be held at least twice a week. Obviously, this percentage of students is not systematically engaged in sports sections that could be a place for them to get more information about motor activity.

When interpreting the received data, it is necessary to take into account the sources from which the relevant information comes, this certainly affects the quality of this information. That is why, for a better

understanding of the content component of the information that the high-school-age students receive, we have identified the sources of the information on the motor activity (pic. 2). When analyzing the answers to this question, we did not take into account the answers of the 11,6 % of students, which indicated that they did not receive information about motor activity at all.

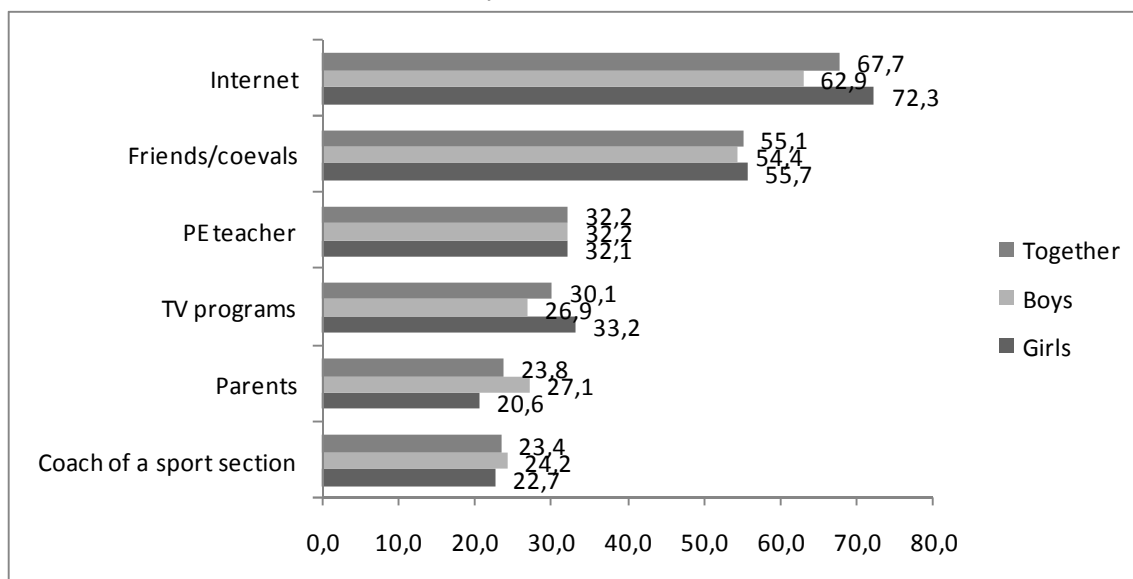


Fig. 2. *The Main Sources of Receiving Information on Motor Activity by High-School-Age Students (% , n= 846)*

As can be seen from the figure, the main source of information about the motor activity for modern students is the Internet, as indicated by 67,7 % of respondents in total. Among the girls this figure was 72,3 % and it was higher by 9,4 % of the boys' index, which was 62,9 %, respectively.

The second most popular source of information was friends and peers. This was indicated in a total by 55,1 % of students of the 10th–11th forms.

Almost a third of the interviewed students (32,2 %) receive information about motor activity from the teacher of physical culture. Television programs are the source of this information for 30,1 % of high-school-age students. Concerning this variant of the answer, it turned out to be somewhat more popular among girls (33,2 %), among boys the corresponding figure was 26,9 %.

Among the five most common sources of information about motor activity, the high-school-age students also mentioned parents (23,8 %) and the coach of the sports section (23,4 %).

In our opinion, the given data reveal a negative picture of the information space of students of the 10th–11th forms in the context of obtaining information about the peculiarities of motor activity. The point is that the proportion of the objective sources of information, which certainly are the teachers of physical culture and coaches of sports sections, does not exceed 33,3 % in the general information space of high-school-age students. In fact, 2/3 of the students receive information about the motor activity, which may contain a significant proportion of subjective, doubtful or even harmful to health regulations. Specialists in physical education and sport should be those people who properly interpret scientific information, research data, the characteristics of certain techniques and convey the correct information about the motor activity to students.

As it has been mentioned, only two information sources are used by high-school-age students by 50 % or more, they are the Internet and friends or peers. It is obvious that communication and information exchange with peers can not be a way of filling the information space with adequate information that requires objective scientific interpretation. As for the Internet, it's worth mentioning that it contains a large array of information about motor activity, means and methods of physical education. Despite the fact that a large proportion of this information is objective and has a proper scientific justification, it is usually difficult for a potential user to separate it from unnecessary information, advertising and spam.

Taking into account that the Internet was indicated by high-school-age students as the main source of information on motor activity, we further identified some features of involving this group of children in the use of this network. First of all, the mass participation of students aged 15–17 years in the Internet activity was determined. As a result of the study, it was found that, in general, 99,3% of students of this age use the Internet.

In the course of study, three main types of activity were identified, which involve the high-school-age students using the Internet (pic. 3).

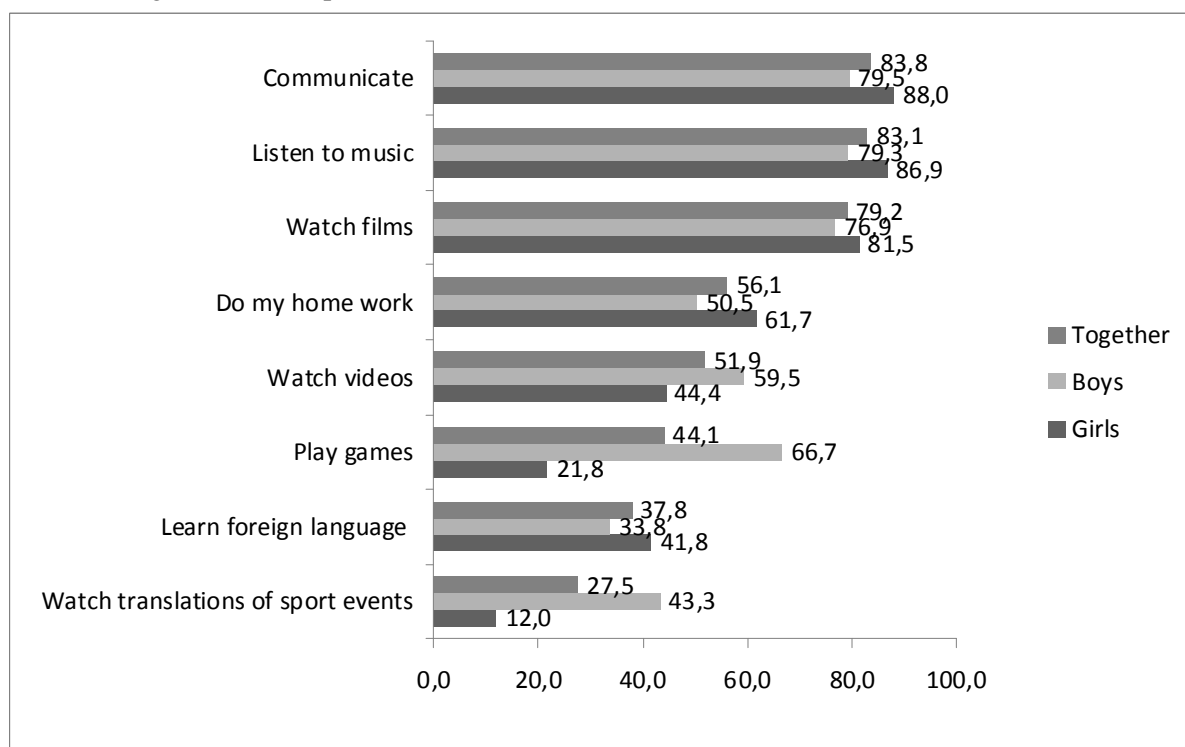


Fig. 3. *The Purpose of Spending time on the Internet by High-School-Age Students (% , n= 840)*

It should be noted that the obtained results were analyzed without taking into account the respondents who pointed out that they did not use the Internet. Most often, high-school-age students use the Internet for communication, as indicated by 83,8 % of the respondents. Among the girls, this indicator was very high and was 88 %, which is 8,5 % more than the corresponding indicator among the boys (79,5 %).

«Listening to music» turned out to be a very common activity among the students of the 10th–11th forms. Overall, 83,1 % of the students indicated this. 79,2 % of students generally prefer watching movies as a kind of activity on the Internet.

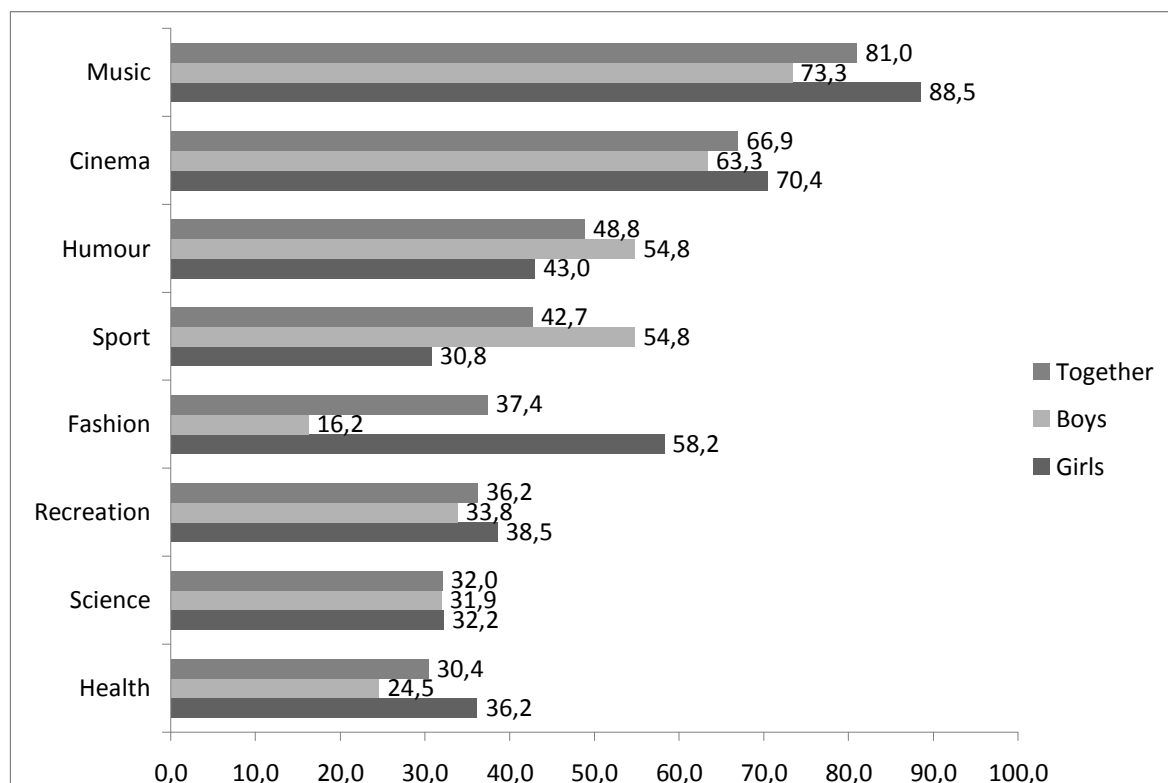
The given data show that the most common types of activities on the Internet among high school students are carried out primarily for entertainment and recreation purposes. The so-called «useful» activities cover a significantly smaller percentage of students. For example, 50,5 % of boys and 61,7 % of girls use the network for their homework. 33,8 % of boys and 41,8 % of girls use the Internet for teaching or studying foreign languages.

Regarding other types of activities, gender differences were the most significant ones in the indicators of high-school-age students who use the network to play various games and watch sports programs. As expected, these indicators were higher among boys. Thus, 66,7 % of boys play games using the Internet, while among girls this indicator is only 21,8 %. 43,3 % of boys use the network to watch broadcasts of sports events. Only 12 % of girls perform a similar activity.

An analysis of the high-school-age students Internet activity is impossible without studying the content of this activity. In other words, it is important to establish a dominant content, which actually determines the relevant activity. To this end, we have found out what information is most often searched for by high-school-age students on the Internet (pic. 4).

As can be seen from the figure, the most needed Internet content for high-school-age students is music (a total of 81 %) and cinema (a total of 66,9 %). Among the girls, these indicators were higher than the overall data and were 88,5 % and 70,4 %, respectively.

Among the male respondents, the next popular types of information were humor and sport. These options have the same indicator, which is 54,8 %. Among the girls the mentioned options were supported at the level of 43 % and 30,8 % respectively.



Pic. 4. Information Most Often Searched for by High-School-Age Students on the INTERNET (% , n= 840)

The difference between the answers of girls and boys concerning the information about fashion and style was significant. On the network this information is searched for by 58,2 % of girls, while among boys this figure is only 16,2 %.

In the context of our study it was important to find out the percentage of students searching for information about health on the network. The results of the study showed that, in general, 30,4 % of high-school-age students are interested in this information , including 24,5 % of boys and 36,2 % of girls.

The results of the research show that the information content that accompanies the use of the Internet by high-school-age students is mostly entertaining one. We assume that the information about sport, which high school students are interested in, is of entertaining nature as well, whereas a scientific-cognitive component is significantly lower.

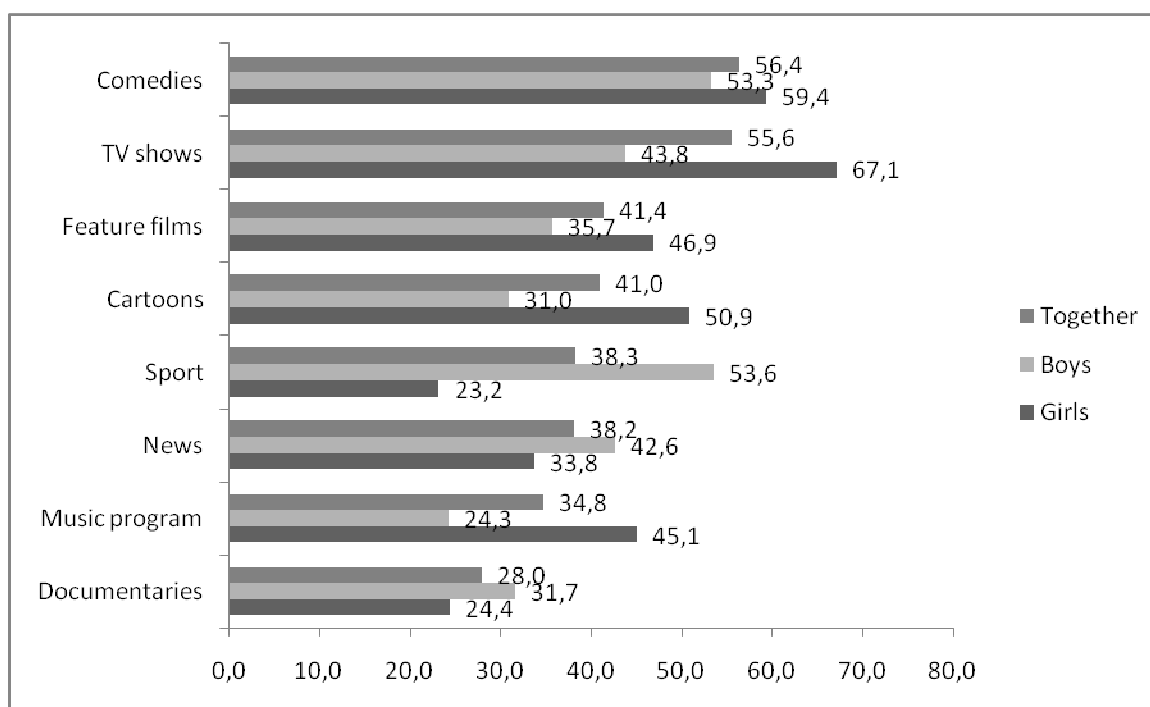
As already mentioned, almost one third of high-school-age students pointed out television as a source of information about motor activity. We have found out what information content is preferred by students of this age when watching certain TV programs. The results are shown in picture 5.

It is obvious that specific TV programs such as sports event broadcasts, sports news, specialized documentary films or programs can contain information about certain aspects of motor activity. It is also clear that the information about motor activity does not have a narrowly focused scientific and methodological bias, and its positive impact can be considered mainly from the point of view of promotion of motor activity.

The data of our research show that, in general, 38,3 % of students of the 10th–11th forms watch sports programs. There is a significant gender difference in indicators: 53,6 % of boys and only 23,2 % of girls watch such programs. The most popular television programs are entertainment programs.

Conclusions. In general, 38,3 % of high-school-age students receive some information about the motor activity once a week or more often. 67,1 % of high-school-age students do not receive information about motor activity on a systematic basis.

The study found that the sources of information about motor activity that are most common among students of the 10th–11th forms can not fully ensure the reliability of the relevant information.



Pic. 5. Television Content Preferred by High-School-Age Students (% , n= 846)

It has been established that the Internet is the main source of information about motor activity for students of the 10th–11th forms, as indicated by a total of 67,7 % of respondents. The second most popular source of information is friends and peers. This was indicated by a total of 55,1 % of the 10th–11th forms students. The high-school-age students also mentioned physical education teachers among the three most common sources of information on motor activity, as indicated by 32,2 % of respondents.

It has been revealed that the information which is most often searched for on the Internet by high-school-age students is mostly entertaining one. TV entertaining content is also interesting for the students of the 10th–11th forms.

Prospects for Further Research will be aimed at finding ways to increase the proportion of information on physical culture and sports in the general information space of students of different age categories. The ability to fill the information sources that are most convenient for high-school-age students with the relevant information content also requires further consideration.

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