In recent years, there is a tendency of students’ motor activity decreasing, which negatively affects the indicators of their physical fitness. Due to this, the issue of the formation, preservation and strengthening of the health of students is of special importance and relevance nowadays. The paper aims to identify and justify a set of measures aimed at motivating university students for motor activity and experimentally verify their effectiveness. The experiment involved 60 1st- and 2nd year students of Volodymyr Vynnychenko Central Ukrainian State Pedagogical University divided into control and experimental groups. At the first stage of the experiment, the respondents’ motor activity was assessed, which showed that most of them had a low level. It provided the necessity for introducing measures for motivating students for physical activity. The suggested technique includes the following stages: encouraging students for activity; goal setting and choosing a type of activity; realization of the tasks set; creating comfortable conditions for activity implementation; analysis of the results, making students realize the satisfaction with physical activities. The suggested approach to organizing the educational process in physical education, implemented in the pedagogical experiment, has contributed not only to a more conscious attitude towards physical education classes but also motivated them for motor activity.

Keywords: motor activity, motivation, physical culture and recreation activity, students, technique.

Introduction

The issues of healthcare of young people are focused on a very person, that is, for one’s own health, one should rely first and foremost on oneself, and also create a favorable social environment which is necessary for healthy physical development (Biglan, Mrazek, Carnine, Flay, 2003; Greenberg, Weissberg, O’Brien, 2003; Patton, Bond, Carlin, 2006).

The growing tendency of motor activity decrease in terms of young people’s health in Ukraine and all over the world is becoming critical day by day. This can result in the society’s physical, spiritual and ethical degradation (Griban, 2009; Griban, 2011; Duttak, 2010), which is considered as a threat for the nation.

The operating system of physical education in Ukraine does not entirely satisfy natural biological needs of school and university students in motor activity, and as a result, the majority of them have a wide range of deviations in health and physical development. The reasons for the low level of physical fitness and deterioration of students’ health are insufficient attention to the issues of physical education in families, secondary schools, vocational and higher educational institutions. Numerous scientific works of domestic and foreign researchers prove that motor activity is not only a means of implementing a motor function as it has a general biological significance. By providing a tonic effect on the central nervous system, it contributes to a more thorough adaptation of the organism to the environment (Nosko, 2001; Rovny, Rovna, 2014; Bergier, Tsos, 2012; Baj-Korpak, Soroka, Korpak, 2010; Bergier, Bergier, Soroka, Kubinska, 2011).

Motor activity is one of the main factors determining the level of physical health of young people. A sufficient level of motor activity is the basis for the proper development of the organism (Yazlovetskyi, Turchak, Leshchenko, 2014). Insufficient motor activity negatively affects most of the body’s functions and is a reason of various diseases (Remzi, Sychov, Vodolazskyi, 2011; Janssen, Katzmarzyk, Boyce, 2005; Swinburn, Caterson, Seidell, 2004).

Lack of motor activity of modern students is a social rather than a biological phenomenon. Therefore, in this case, the essential role is assigned to the physical activity of students, which is focused on changing the state of their organisms, gaining a new level of physical qualities and abilities that cannot be achieved by any means other than sports.

Studying the structure of motives, needs and interests of students for physical education and sports is initial indicators significantly influencing their motor activity (Bilichenko, 2015; Kevtun, 2016).
Among all personality traits motives occupy a special place, since they primarily determine socially meaningful behavior in human activity. In this regard, one can say that in any science, the issue of motives is important because the core of the personality is deeply conscious experiences in the form of motives and interests (Vynnik, 2010; Holoviichuk, 2012; Shyrba, 2016).

The need for movement and physical fitness, and most importantly, health strengthening are the psychological foundations of motivation for physical culture and healthcare activities. Motivation must be distinguished both in internal and external aspects. Active interest in physical education is formed as a result of internal motivation, which arises when external motives and goals correspond to the capabilities of the individual, that is, they are optimal for them (not too complex and rather easy), and when they understand the subjective responsibility for their implementation (Hopper, Fisher, Munoz, 2008; Bouchard, Blair, Haskell, 2007).

**Aim and Tasks**

The paper aims to define and substantiate a set of measures aimed at motivating students for motor activity.

The research tasks are as follows:

1) to analyze the specifics of the relationship of students’ motivation for physical education and sports;

2) to distinguish indicators and types of motor activity of pedagogical university students, to assess its levels;

3) to present a set of measures for motivating students for motor activity in the framework of physical education, and experimentally verify their effectiveness.

1) to conduct reassessment of the levels of the respondents’ motor activity.

**Research Methods**

The study involved 60 students of the 1st-2nd years of study at the Volodymyr Vynnychenko Central Ukrainian State Pedagogical University, who were further divided into two groups: control and experimental.

In order to evaluate the level of the respondents’ motor activity, The Framingham Risk Score was used, which provided quantitative and qualitative assessment of the students’ motor activity dividing it to the following five levels: basic, sedentary, low, average, and high. The basic level includes sleeping and passive rest. The sedentary one involves reading, sitting at the table, watching TV, listening to music, working on a computer, etc. The low level covers attending classes, driving a car, going by a bus, walking, personal hygiene. The moderate one includes work about the house, regular walking, working in the yard, painting, cycling, etc. And the high level involves power sports, running, dancing, long-distance swimming, fast walking, mountain biking, participation in sports competitions.

According to the method, the optimum index of motor activity is 42 points, which involves motor activity at the basic level – 8 hours, sedentary – 8 hours, low physical activity – 2 hours, average – 3 hours, and high – 3 hours as well.

The normal range of motor activity of university students is the one that fully satisfies the biological needs of the movements, corresponds to the functional capabilities of the organism, promotes its development and physical fitness. In scientific literature, the optimum volume of motor activity of students is 12-14 hours per week with sufficient physiological load (Griban, 2009).

The evaluation of the levels of motor activity in students implied a timekeeping of daily motor activity (we recorded the time spent for different types of movements during the day). Then the systematization of the performed movements into the basic, medium and low levels. The time taken for each of the five levels was calculated. According to it, we developed special self-control diaries for the students, which recorded all types of motor activity performed throughout a day.

**Research Results**

The results showed that the motor activity of most students corresponded to the basic, medium and low levels. 89.3% of the day time the respondents spent for sleeping, resting, watching television, listening to music, walking and studying. A high level of motor activity was found in only 21.7% of the students.

At the same time, examining the weekly time budget of the students helped to reveal their overall motor activity. The weekly time budget is focused on increasing the reserves of mental processes and intellectual activity.

The results of the conducted research show that this function is successfully carried out by physical exercises and sports as they activate mental processes. It was found that physical education classes, sports training, participation in competitions and various sporting events, independent physical exercises and morning gymnastics took on average 6.9% of their total time. It is not enough for providing motor activity and mental processes restoring.

At the beginning of the experimental work, we also examined the ways of the students’ involvement into motor activities, their most common types, their preferences during leisure time. The research was conducted in the framework of compulsory and extracurricular forms. The level of their motor activity was assessed. According to the Framingham Risk Score, the level of motor activity in the students did not differ significantly and averaged 34 points, with the specially organized motor activity taking only 1% of the time in both groups (Table 1).

The students’ low motor activity could be observed, which was manifested in the absence of types of activity in most students, which exceeded the energy cost of the small and sedentary levels. The structure of the time of most students included mainly sleeping, passive rest, attending classes, as well as other kinds of daily work.

The following types of motor activity were peculiar for the students: morning exercises, participation in sports events among teams of faculties, participation in competitions on the faculty championship, out-of-class training sessions, walking after classes.

Therefore, the next important task of our study was to develop and implement a set of measures for motivating students for motor activity in the context of their physical education.
The Essence of the Suggested Technique

The first stage of designing a lesson provided gradual inclusion of students in cognitive activity; achieving the necessary level of commitment; the gradual solution of the educational and health tasks envisaged by the classes.

At the second stage of designing a lesson, there was a clear definition of physical exercises that every certain student should perform during the class and a certain sequence of their implementation.

The third stage was focused on determining the interconnected sequence of actions of the teacher and the student in solving specific problems, the selection of necessary methodological techniques for achieving the desired result, the organization of subgroups, etc.

A teacher should perform the following actions during the classes within the framework of the suggested technique:

- influence the emotional-sensory and behavioral sphere of students;
- follow a student-centered approach, taking into account motivational tendencies, realization of the desire to continue physical culture and recreational activities;
- develop students’ ability to comprehend, analyze and make adjustments to achieve results.

By realizing the tasks for improving the motor activity of students, we identified and tested optimal tools and methods for their improvement in the educational process. They provide for the optimization of the content of the training sessions and the assessment system; the organization of such a way of students’ lives, in which they gradually acquire knowledge and improve skills, develop their physical and professional qualities necessary for their work in the future; improvement of the system of physical culture and sports events bringing a sense of joy, satisfaction, and mutual responsibility; avoiding negative emotions; the combination of the principles of obligation and voluntariness; a combination of physical culture and sports motivation with broader motives; assessment and self-evaluation of each student’s physical fitness; ensuring the coherence of external and internal factors contributing to the formation of the need for physical self-improvement.

Extracurricular recreational and sports activities are of great importance in increasing the motor activity of students. When it was organized and conducted, we took into account the reasons impeding the formation of a positive attitude of students to physical activity. Based on this, we identified the following directions for the improvement of this work: methodological provision of extracurricular recreational and sports activities; engaging training experts who would manage this work; systematic planning of all kind of physical activities; encouraging students to participate in the organization and conducting sports competitions, tourist trips and other events.

Realization of these directions in the experimental group made it possible to enrich the sports leisure of the students; create a sustainable structure of self-management of physical culture, recreation and sports activities as part of extracurricular work; attract a significant number of students to participate in physical culture activities; increase physical fitness, motor activity and interest of the students in physical education and sports; etc.

In the process of forming the students’ stable interest in physical culture and sports as well as motivating them for physical activities and sports in the experimental group, the work was focused on the following:

1. Provoking students’ interest in physical education and sports as a prerequisite for their motor activity.
2. Evaluating the dynamics of physical development and physical fitness of the students.
3. Upbringing the habits of doing everyday physical exercises in the students.

The work in the experimental group envisaged the realization of the following main directions: teaching the students to perform self-assessment of the dynamics of their psychophysical development and physical fitness; improvement of their self-study skills (in the framework of physical education); teaching them to evaluate the effectiveness of these activities and their impact on increasing the level of functional indicators, physical development and motor skills.

Teaching students to perform self-assessment of their psychophysical state and physical fitness involved teaching them to evaluate the initial level of organism functional indicators motor skills, which were recorded by the students in the self-assessment diaries.

An important area of the experimental work involved providing the students with the technique of independent physical exercises. This is due to the fact that raising the level of their methodological knowledge and ability to do physical exercises on their own (as part of out-of-class activities) can increase their motor activity, as they get more consciously focused on increasing their physical fitness, development of basic physical qualities. The students were
provided with methodological information and recommendations of recreational nature, as well as programs for improving physical fitness.

Reassessment Results
Testing the efficiency of the proposed set of measures for motivating students for motor activity involved the same methods of assessment.

As a result of the reassessment, it was found that in the experimental group, the motor activity index increased and averaged 36.3 points as compared to 34.1 points at the beginning of the experiment (Table 2).

Table 2. Results of the Respondents’ Motor Activity Reassessment

<table>
<thead>
<tr>
<th>Motor activity</th>
<th>Duration, min</th>
<th>% of 24 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily living activities</td>
<td>876.1</td>
<td>871.8</td>
</tr>
<tr>
<td>Organized</td>
<td>17.1</td>
<td>35.0</td>
</tr>
<tr>
<td>according to the Framingham Risk Score</td>
<td>33.8</td>
<td>36.3</td>
</tr>
</tbody>
</table>

Its growth occurred as a result of an increase of the time spent by the students for motor activity. Besides, the indicators of motor activity according to basic, sedentary, average and high levels also changed. Moreover, the increase in average and high levels of motor activity occurred due to the decrease of the sedentary level (watching television programs, computer gaming, talking on the phone, using transport, etc.). Also, the structure of the average level activity changed as well by spending more time for homework, walking, morning gymnastics. It can be assumed that the increase in the high level of motor activity was due to additional kinds of occupation indicated by the students in the questionnaires.

The suggested measures for increasing motor activity of students by motivating them not only contributed to a more conscious attitude towards classes, but also solving the problem of individualization of actions by physical exercises, creating a fundamental basis for self-determination and socialization of students.

At the end of the experiment, in order to verify the effectiveness of the proposed set of measures, we conducted a survey (applying specially developed questionnaires), which was aimed at evaluating the levels of motor activity of students of control and experimental groups. The results of the study show that in the experimental group, the levels of motor activity are significantly higher than those in the control group (Table 3).

Table 3. EG and CG Respondents’ Motor Activity at the End of the Experiment

<table>
<thead>
<tr>
<th>Kinds of motor activity</th>
<th>EG and CG Respondents’ Motor Activity at the End of the Experiment</th>
<th>Level of activity, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systematic</td>
<td>Non-systematic</td>
</tr>
<tr>
<td>Morning exercises</td>
<td>60.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Participation in sports competitions among faculty teams</td>
<td>43.3</td>
<td>26.7</td>
</tr>
<tr>
<td>Participation in competitions on the faculty championship</td>
<td>50.0</td>
<td>33.3</td>
</tr>
<tr>
<td>Extracurricular physical activities</td>
<td>70.0</td>
<td>23.3</td>
</tr>
<tr>
<td>Walking after classes</td>
<td>56.7</td>
<td>20.0</td>
</tr>
</tbody>
</table>

The obtained data review shows that morning exercises were performed systematically by the EG students 30% more as compared to the control group respondents, unsystematically - 10% less, there were 20% less those who did not participate in the EG; 16.3% more EG students as compared to the CG ones systematically participated in competitions among faculties teams, unsystematically – 16.7% more, and 33.4% less EG students who did not take part; concerning championship competitions – “systematically” – 23.3% more, “unsystematically” – 6.7% more, and “did not take part” – 23.3% less; attending extracurricular training sessions – “systematically” – 46.7% more, “unsystematically” – 23.3% less, “did not take part” – 26.7% less; walking – “systematically” – 36.7% more, “unsystematically” – 6.6% less, “did not participate” – 30.1% less.

The suggested measures for motivating the students for motor activity not only increased its level but also improved the efficiency of the entire educational process.

The most important result of the proposed set of measures, in our opinion, is the creation of conditions for motivating students for motor activity. Ensuring exactly this effect is the most important function in the field of physical education, which is most consistent with the goal and objectives of the whole system of education in the modern society.
Conclusions

Thus, motivating students for physical activity is an important condition for increasing the level of their motor activity. Providing the full physical development of students, strengthening their health and maintaining a high functional level of physical and mental activity and opportunities are possible upon condition of provoking their interest in physical education and sports, motivating them to attend classes in sports sections, performing physical exercises at home, taking an active part in public life in the physical culture and sports field.

In order to assess the motor activity levels, the Framingham Risk Score was used, which provided quantitative and qualitative determination of the motor activity of students and its division into five levels: basic, sedentary, low, average and high. The low level of motor activity could be observed in most of the respondents, which was manifested in the absence of most types of physical activity requiring little energy. Most of the time was mainly spent for sleeping, passive rest, attending classes, and homework, that is, passive activities.

Physical education programs in higher educational institutions do not always provide an expected effect, which thus forces teachers to search for new forms and methods for increasing the level of motor activity of students, organization of their active life, to study the needs of young people in sports activities, and to develop effective ways of their application both in compulsory and optional forms.

As a result of conducting a pedagogical experiment with the implementation of the developed measures aimed at motivating students for physical culture, recreation and sports activities, their efficiency was proved. The technique not only contributed to a more conscious attitude of the students towards classes but also helped to solve a problem of individualization of actions by physical exercises, creating a fundamental basis for self-determination and socialization of students.

The obtained results have shown positive effect of the following kinds of physical activities on the level of the students’ general motor activity: morning exercises, participation in sport competition among university teams; extracurricular training sessions and everyday walking. By comparing the motor activity levels in the experimental and control groups, a significant difference in favor of the experimental one could be noticed according to all indicators of the students’ motor activity.

REFERENCES


**ЛІТЕРАТУРА**


17. Bergier J. Aktywnosc fizyczna pielęgniarek z uwzględnieniem ich wieku (Physical activity of nurses
FORMUWANIA MOTYWACJI STUDENTÓW DO RUCHOWOJ AKTYWNOŚCI W PROCESIE FIZYcznego WYHOBANIA

Ostatnimi rokami na tle intensyfikacji nacwalskiego procesu u zakładach wyczowej oswity przysladowa ćwietnia tendencja znieknięcia obęmu ruchowej aktywności studentów, co negatywnie poznacza się na zaskazach jękiowego fizycznego stanu, u zwięzku z czym osobliwej znaczenicy nabuwa się witalanie formowania, zбережenia i zmienienia zdrow’                                                                                                w studentscnej wloclæi. Metodocio studiowienia jest wyznaczenia i obruntowania kompleksu zadań, spromowanych na formowania motywaciji studentów do ruchowej aktywności w u 수도wach pedagogicznych zakładach wyczowej oswity ćwa, tа eksperymentalna przebywka ich efektywnosti. U dośledzeni wzięło w część 60 studentów I–II kursów Centralnoukrainckiego dzerjawnego pedagogicznego uniwersytetu imeni Wlodymira Vinnychenka, jacy w podalnym byli rozpończenen na by grupy – kontrolną i eksperymentalną. W procesie prowadzenia eksperymentu u studentów kontrolnych i eksperymentalnych grup byo wyczacho rëwku ruchowej aktywności za Freaminghembsem metodiko, jeky u bardzoci respondentów wizyno nizkim, co zaświczoło nieobhodnictw rozrobki specjalnych zadań i τa uprowadzenia zadania pokraczenia sytuacji. Zaproponoena technologia formowania motywacji studentów do ruchowej aktywności wyczacho cztery etapie: spowadzenie, motywacja do działości; postawienie mety, wybier dzialnoś; realizacja postawionych zadań, wyprowadzenie stawionych komfortowych umów dla działości; analiz otamanych rezultatów, osielenia zadawolnoś działoś; formowania bagejania u studentów prowadzića za wjaż boolośczenia mety. Kompleks zadań, jcy postawno oburtowane w robót iz zastosowania specjalnych zasobów i metod, wídwoają iedwidualnym, diferencjowanej i osobistéj zorízowanej wicboru studentom podalnej fízkulturalnej działoś. Za rezultatami poprzedniej działości rëwku ruchowej aktywności studentów byo wstawonno, że realizowany w pedagogicznym eksperyment wściśko do organizacji nacwalskiego procesu z fizycznego wizjonania sprácia nie tylko biele uowdomionemu stawowaniu studentów do zanęt, ale ľy wriunowo problemi iedwidualizacji dëj fízicznymi wprawami i stawowaniu fundamentalnej osnovy dla ich samowyznienia i sozializacji.

Kluczowi słowa: ruchowa aktywność, motywacja, fízkulturalno-ozdrowowa dzialnictw, studenti, metodika.

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