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Modern approaches to increasing the health efficiency of physical training programs for students

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Abstract---This article highlights modern methodological approaches to improving the health effectiveness of physical education programs for students.

Keywords---movement (motor), lack of movement, morphological, physiological, mental, spiritual development.

Introduction

The urgency of the problem. Long-term reform of the social and industrial sphere of our society does not always have a positive impact on the lifestyle, work and life of various segments of the population, especially students. During their studies at a higher education institution, the complexity of the vocational education program and the movement (motor) activity of students during its mastering are limited. As a result, they develop chronic mental and emotional stress. Due to the lack of motor activity, the process of adaptation of students to learning is slow and painful, it continues with nervousness and various diseases of the cardiovascular system (3, 10). Lack of motor activity has a negative impact on the health of women, especially university students (15). The problem of hypokinesia in schoolchildren remains one of the foundations of research by local (4, 5, 6, 8) and international (20) specialists.

When designing physical education programs for students, a number of current issues related to methodological approaches to assessing the health effectiveness of existing and developing exercise complexes, as well as the selection of basic tools for the implementation of sports under the requirements of the new physical education program. The use of "pure" form or the addition of exercises from other sports, the size of the loads and how they should be performed, etc., remain unresolved. We need to determine not only the traditional indicators of motor (motor) activity with the tools and methods of efficiency assessment used and developed in practice, but also the more professionally important adaptive features of the body, level of development, features and qualities, health level. (1, 2, 12, 14, 16, 18). The relevance of the presented work is also an attempt to systematize handball equipment and auxiliary exercises in other sports (basic, athletic, rhythmic gymnastics, athletics elements) by criteria such as energy direction, energy capacity of the loads performed to compensate for lack of movement of higher education students.

Aims and objectives of the study

The aim of the study was to develop and experimentally substantiate a program of physical training of students of higher education institutions based on handball as the main sport and to introduce it into the educational process with additional exercises, to ensure their complete elimination of motor (motor) insufficiency. To achieve this goal, it is planned to address the following key tasks:

- To study the level and dynamics of physical development, movement (motor) and functional training of students majoring in "handball" on the standard state program;
- try to systematize the applied handball equipment and additional exercises according to the criteria of energy orientation to determine the maximum energy requirements of the loads;
- to select and substantiate (prove) in practice a convenient combination of additional exercises for handball and other sports, as well as to determine the modes of their use that give a more healing effect in the classroom;
- Development of experimental requirements for the program of physical training of students of higher education institutions on the basis of handball tools, which adequately compensate for the lack of movement (motor) activity in terms of their physical development, fitness and health.

Organization of research work

Today, the main directions of development of physical culture and sports, defined by the Law of the Republic of Uzbekistan "On Physical Culture and Sports": decision-making on a healthy lifestyle, comprehensive physical and spiritual development, improvement, formation, etc. (7) one of the main tasks of students' physical education is to shape their need for self-improvement and maintain a high level of health (18). The most pressing issues remain related to the assessment of the volume and intensity of workload, taking into account the organizational and methodological forms of training in selected areas of the educational process, their effectiveness in rehabilitation.

The problem of measuring health levels has become particularly acute in today's environment where the negative impact of hypokinesia on the physical development and health of various groups of the population and primarily students has increased. In the dictionary of physiological terms, the concept of health level is "the manifestation of symptoms that characterize the health of an individual (or group of individuals). Some of these features - in balance with the environment, the breadth of adaptive capabilities, the functional resources to respond to different influences, the level of performance - can be quantified, although there is no general agreement on the size and criteria of such an assessment.

Our work shows that traditional methods of assessing the health effectiveness of existing and developed programs for physical fitness of students do not provide sufficient information in determining the level of health of young students and the effectiveness of the educational process and are almost useless. Therefore, many experts, including foreign experts (1, 2, 12, 14, 16, 17) believe that the principle of a systematic approach to the study of health is only the diversity and interdependence of morphology that occurs during adaptation of the organism to different environmental conditions. concluded that it allows for a deeper understanding of physiological and mental processes.

Since the level of health is the level of development of adaptive qualities and characteristics of the body, V.S.Fomin (19) together with students developed and tested a new comprehensive method of quantitative measurement of health (19). The basic principles of systemic functional metrology, developed by Anoxin (1) and the author (18), allow to study the processes of adaptation of the human body to ecological, socio-industrial and environmental conditions. The set of quantitative descriptions of health levels includes 20 integral indicators of the level of development of the most important professional qualities and characteristics of the body by determining the author's test and converting the results into units developed using specially developed, empirical formulas. Integrated evaluation of the results is given in the form of a graphic image - "health profile of the subject." A detailed description of this method is given separately. Extensive use of a set of equipment developed on the basis of this technique allowed V.S.Fomin and his students to compare for the first time the negative consequences of lack of physical activity in schoolchildren and students, its quantitative properties, as well as the effectiveness of developed programs.

AV Kudryavtsev (12) in his dissertation showed that there is a clear shortage of motor activity among students of the Faculty of Information Technology of GulSU. Compared to them, the students of the Faculty of Pedagogy had a low level of physical activity. By increasing the volume of lessons to 8 hours per week and their intensity of movement to 70-80%, using UJT tools, mainly with mixed energy-oriented loads, the author taught mathematical students to increase the very low level, ie from 10-15 n units to the required 50 n units and complete motor activity. managed to provide coverage. The ineffectiveness of the current system of physical training was confirmed by the very low level of development of similar components among the students of the control groups of the Faculty of Information Technology and Pedagogy of Gulistan State University.

In her dissertation, N.A. Anokhina pointed out the lack of movement among students of the Faculty of Architecture of the Voronezh Academy of Architecture and Construction (2). The performance and energy components of student health averaged 20 n. Using rhythmic gymnastics in a variety of options - individually and in combination with other sports elements, the author concluded that it was possible to fully compensate the Academy students with a lack of movement activity with loads of 6 hours per week and up to 40% mixed energy supply mode. At the same time, rhythmic gymnastics exercise complexes, together with elements of sports games in a 3: 1 volume ratio, had the greatest healing effect. A study of students in the control group confirmed that the traditional physical fitness system used by students at the academy was not ineffective.

In his dissertation VI Kozlov (11) showed not only the quantitative characteristics of the obvious lack of motor activity in first-year students, but also its development throughout the educational process in higher education institutions. The negative consequences of lack of physical activity were reflected in the low level of physical and functional readiness of students, as well as the "delay" of their physical development during their studies in higher education institutions, the decline in performance from year to year. Using differentiated programs developed for each course, the author gradually combined loads in a mixed (aerobic-anaerobic) energy regime for 6 hours per week, combining the greatest healing effect with rhythmic and athletic gymnastics with elements of cyclic and playful sports. increased from 30% in the first year to 40% in the fourth year, and the average movement intensity of the training was at least 70%. The implementation of experimental programs in the learning process fully predicted the lack of movement activity of female students. Thus, the aerobic activity rate averaged 52 n. and this was slightly higher than the average for the women. The low energy and movement components of health throughout the study period in the control group students, as well as the development of movement deficits, once again demonstrated the ineffectiveness of their traditional physical fitness system.

While S.V.Rybalkina's dissertation (16) confidently confirmed the hypothesis of the origin of the obvious deficit of students, the irrational movement regime of high school students and the ineffectiveness of the traditional physical education system, V.S.Fomin did the same. showed that there was a clear lack of movement activity in high school students in this style. Most of the indicators of energy and movement components of health are on average 20-25 n instead of 45-50 n. did not exceed unity. Using various combinations of UJT complexes, the author developed an experimental program of physical fitness of school students, which was able to fully compensate for their lack of movement (deficit). In this program, the volume of strength exercises was 15%, cyclic exercises - 25%, sports games - 45%, the priority of physical activity in the high-intensity zone was at least 40%, the average movement intensity was 75% and the total volume of exercises was 4 hours per week. The data obtained in the control group revealed a lack of motor activity in general secondary school students during the school year.

Using the method of AV Loginov (13), VS Fomin, quantitative characteristics of the level of health of young weightlifters and the application of loads with a mixed energy direction, the introduction of correction of the learning process and the reserve of functional capacity of the student-athlete body allowed to increase the

level. In her dissertation N.T.Nikolaicheva (15) students of medical college, a special medical group was appointed due to the presence of moderate (1-2 degree spinal scoliosis) diseases of the musculoskeletal system, caused by long-term lack of physical activity, ie lack of movement 15 -16-year-old girls found a significant drop in energy and movement components.

The reason for the low efficiency of students' health in secondary special education institutions is the low number of study hours in the physical education program, irrational (irrational) distribution of load energy regimes, ie loads up to 80% in aerobic energy mode, no more than 15% in mixed mode and physical education classes showed that the intensity of movement was insufficient, on average, 55%. Developed by the author, it combines elements of rhythmic gymnastics (45%), cyclic (7%) and recreational sports (12%), as well as correctional gymnastics (12%) and strength exercises (12%), with a density of 80%. the introduction of an experimental program based on the use of "energy-intensive" exercise complexes with an average of 35% more classes and less workloads in the high-power zone fully covered the lack of physical activity of girls in the special medical group within a year.

S.I. Interesting data were obtained by Davidov (9), which detailed the health-improving effectiveness of the educational process in gymnastics-based physical education as a major sport. In the first case of 1st year students, the negative consequences of a pronounced lack of author activity were identified. The author tried to systematize gymnastics and other sports elements according to the criteria of energy orientation of physical loads. This made it possible to select basic and auxiliary exercises that would help to perform the loads more in the mixed power supply mode. The author has clearly demonstrated that the traditional system of physical training, based on gymnastics as the main sport, for 4 hours per week, does not provide compensation for the lack of physical activity of female students. The increase in the total volume of classes to 8 hours per week and the selection of the most "energy-intensive" means of gymnastics helped to significantly increase the level of health of female students, but did not fully compensate for hypokinesia. The experimental program of physical training of female students, designed in combination with sports gymnastics and elements of athletics, as well as a set of rhythmic and athletic gymnastics exercises "energy-intensive", completely eliminated the lack of physical activity among female students of Gulistan State University.

Thus, the analysis of the literature on the problem of modern methodological approaches to improving the health effectiveness of physical education programs for students showed that this problem is exacerbated, especially in today's educational and industrial hypokinesia increasing the negative impact on physical development and health of this population. Traditional methods of assessing the health effectiveness of existing and developed programs on student physical fitness are insufficiently informed and are virtually unsuitable for quantitative assessment of student health. Many experts believe that the principle of a systematic approach to assessing the health effectiveness of these programs provides an effective selection of the most appropriate means and methods of physical education to fully compensate for the lack of motor activity in different contingents of students.

The above-mentioned dissertations under the guidance of V.S.Fomin fully demonstrate the effective implementation of experimental programs for the physical training of various contingents of students, including female students of higher education institutions, which fully compensate for the lack of physical activity. These programs are based on a different mix of UJT tools as one of the practical directions given in the program of higher education institutions. Based on the use of one selected sport as a means of physical training of students, the possibilities and health benefits of the other direction, in our opinion, are still poorly understood. Of all the traditional sports that are widely used as a basis in the educational process, only in the dissertation of S.I.Davidov the means of gymnastics and methods of their application are studied in detail.

The author has convincingly shown that the peculiarities of performing different elements of gymnastics do not provide the necessary educational effect, especially for the energy component of health, and it is recommended only in combination with elements of rhythmic gymnastics exercises and sports games to have the right effect on health. In our opinion, the most common means of physical training of student youth are sports games, in particular, handball. By participating in the game, students receive significantly larger loads, the performance of which in other conditions, in a different environment, is associated with the manifestation of important volitional actions. In particular, the large amount of movement in handball is associated with a high emotional background, which is an important factor in supporting interest in physical education. Handball is widely used not only to improve physical condition, but also as a means of professional physical training of students of various specialties. In our opinion, such widespread use of handball is characterized as one of the most effective means of physical training of student girls. Therefore, a detailed analysis of the use of handball as a major sport, its means and its combination with other sports, can significantly contribute to the optimization of the educational process in higher education, taking into account their "energy requirements" and health benefits.

Conclusion

An analysis of a number of studies of local literature and foreign authors known to us shows that the mode of movement is unbalanced and the effectiveness of the model state program on school physical education is low, resulting in a clear lack of movement activity in general secondary school students. Graduates continue to study in higher education institutions and are again exposed to the hypokinesia of education and production. On the one hand, the complexity and acceleration of the vocational school program leads to a decrease in student mobility, on the other hand, the development of its negative consequences in the form of uncertainty and "delay" in student physical activity leads to deterioration of their overall performance and health.

In our opinion, despite the wide range of opportunities for teachers' initiative and creativity in choosing the means and methods of physical training of students, the current "Model Program of Physical Education for Higher Education Institutions", as in previous programs, has a number of old and new shortcomings:

- the use of traditional control standards, such as "JTD" (level of physical fitness) as a criterion for assessing the effectiveness of the developed tools and methods;
- Lack of methodological basis for the development (creation) of exercise complexes and differentiated programs using the proposed areas;
- First of all, the imperfection of the criteria for quantitative assessment of health effectiveness.

Based on the results of statistical analysis of morbidity and disability or mobility control standards, traditional methods of assessing the effectiveness of rehabilitation and traditional methods of assessing the effectiveness of health in the development of differentiated programs of physical training do not provide sufficient information and are almost unsuitable for quantitative assessment of student health. . Many experts have concluded that only a systematic approach to measuring the level of development of the most professionally important adaptive qualities and characteristics of the body, developed by V.S.Fomin, can serve as a reliable tool for assessing the health effectiveness of applied exercise tools and methods. This methodological approach can be used as a physiological and pedagogical basis for the creation of science-based physical training programs for students with various combinations of UJT tools, which are almost proven by the introduction of V.S. Fomin's dissertation recommendations and experimental programs. . In our opinion, the possibilities and health-improving effectiveness of sports orientation, based on the use of a single selected sport as a means of physical fitness of students, have not yet been sufficiently studied. Of all the traditional sports that are the basis for the physical training of students, only the means of gymnastics and methods of its application are studied in detail in the dissertation of SIDavidov. In our opinion, the use of handball as a major sport in terms of health efficiency, a detailed analysis of its means in combination with other means of physical training, both in "pure" form and taking into account their energy capacity, significantly contributes to optimizing the educational process of physical education students. possible. All of the above served as the basis for selecting the object, defining the goals and objectives of our study.

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