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EFFICIENCY OF SPORTS AND IMPROVING OCCUPATIONS WITH FEMALE STUDENTS ON THE BASIS OF FUNCTIONAL TRAINING

Key words: female students, health, fitness, functional training.

The pedagogical experiment testified to the fact that classes of functional training by the worked program promoted positive dynamics of general and muscular endurance, strength, flexibility, ability, power and speed-power qualities. It is shown, that the functional training positively influence both on dynamics of a level health of the female students 17-18 years end aged in functional training within six months is in investigated.

Ключевые слова: студентки, здоровье, фитнес, функциональная тренировка.

Педагогический эксперимент свидетельствует о том, что регулярные занятия функциональной тренировкой способствуют положительной динамике общей и специальной выносливости, гибкости и скоростно-силовых качеств. Показано, что данный вид физической активности оказывает положительное влияние на состояние здоровья студенток 17-18 лет после 6-месячного эксперимента.

Introduction

For today one of the main tasks, facing to higher educational institutions, is solution of problems of maintenance of students' youth health. Health level of growing up generation is constantly decreasing. The problem of seeking the ideas of refreshing and modernizing the physical education lessons is getting more topical. One of the ways of solving the problem in our opinion is application of fitness in the system of physical training at the institutes of higher education. Inclusion of modern fitness technologies in structure of classes in physical culture can become alternative of the standard techniques. Functional training is one of the most popular systems of impellent activity of student's youth, which involves training the body for the activities performed in daily life [1].

In this article effective ways of regulation of loading are offered at functional training lessons for the female students exempted from practical training in Physical Culture, taking into account modern requirements and using available physical exercises. A research objective was to reveal dynamics of change of indicators of physical development of female students throughout six months of training in higher school [2-3].

Materials and Methods

Observed was underway at the Department of Physical Education and Sports Kazan National Research Technological University (hereinafter KNRTU) in 2011-2012. The study participated 159 first-year students of the Faculty of Social and Technical Systems (FSTS), aged 17-18 years. Of the total sample of students identified the control group (CG) - 75 and experimental group (EG) - 84 peoples.

In the experimental group training spells built on the principle of consistency. Length of preparatory part of the workout session (limbering-up) 10 minutes in the exercise include exercises of walking, running with the active admission of the hands and feet. In the main part of the session (15 minutes) to perform combined medical exercises with regard to the level of fitness and the nature of the underlying disease. Then the students of the

experimental group performed an exercise for 30 minutes (20 minutes - on the lower body, 10 minutes - on the upper body). The final part of the session (5 minutes) included loosened exercise and restore breathing.

In working with students can be roughly divided into four successive stages. The first stage was aimed to fastening the cardiovascular system. Duration of aerobic part of the workout session - 40 min. The intensity of muscle loading to 65% of predicted maximum cardiac rate (CR) (130-150 beats per minute).

In the second stage students acquainted with the committee manner of the exercises, critique and fixing typical errors and the possible consequences of incorrect performing an exercise. Duration of aerobic part was reduced to 30 minutes. Cardiac rate increased to 70% of the maximum intensity of physical activity.

In the third stage may be increased cardiac rate up to 75-80% of the maximum value. Duration of aerobic part was reduced to 20 minutes by increasing the content of exercises the power and complexity of the coordination pattern. This includes a combination of exercises without weights or special equipment of low weight (dumbbells, body bars).

In the fourth stage, the intensity was increased to 85% of the maximum duration of the aerobic part was reduced to 10 minutes. In strength training included various combinations of exercise on balance, coordination, exercise with weights.

With students of the control group classes were taught in the traditional manner, in accordance with plan of study and work program for the subject "Physical Education."

The number of hours per week - 2.

Satisfaction with the process of physical education students was investigated based on the analysis of data obtained using the methods of teaching of Lihachev.

Assess tolerability dynamic loads carried by the test of Rufe, reflecting adaptability of the cardiovascular system in response to the measured physical load [4].

Motor readiness assessment was performed with standard pedagogical tests [5].

Results and Discussion

Differences in physical education programs affected the dynamics of indicators of satisfaction

occupations students of experimental and control groups (Table 1). The number of students unmet physical education in the control group increased by half, and in the experimental group decreased fourfold by increasing the level of satisfaction with the process of physical education.

Table 1 – Trend data of the satisfaction of physical education students

Kinds of satisfaction	At the beginning of the experiment		At the end of experiment	
	EG	CG	EG	CG
Conditions of the workout session	1,87±0,13	2,35±0,26	2,54±0,15	2,49±0,19
Subject matter of the workout session	0,51±0,05	2,32±0,14	1,95±0,16	2,25±0,23
Result of the workout session	0,45±0,06	2,47±0,13	2,15±0,18	2,16±0,15
Mutual relations with fellow students	1,94±0,24	2,14±0,17	2,78±0,19	2,05±0,27
Mutual relations with fellow coacher	2,18±0,21	2,56±0,16	2,43±0,24	2,32±0,21

* Differences significant at $p < 0.05$

Comparative analysis of the sample at baseline test of Rufe (1) in the control group (12.6) had a significant difference ($p < 0.05$) compared with the experimental (14.8) (Table 2). At the end of the experiment (2) the positive dynamics in the experimental group (11.8), while the control group remained virtually unchanged.

Table 2 - Average test of Rufe sample at the beginning and end of the semester

Group	Test of Rufe 1	Test of Rufe2
Experimental	14,57±0,23	11,43±0,17*
Control	12,56±0,64	12,42±0,18

* - Differences significant at $P < 0,05$

Similar conclusions can be made when analyzing the results of physical fitness (Table 3).

Results of the study show that functional training with the initial level of the cardio-vascular system is an effective improvement over traditional methods of teaching with female students. This increase in intensity can occur only after the positive dynamics of the physical condition of the students.

Table 3 - Trend data of the physical fitness of students

Indicators	At the beginning		At the end	
	EG	CG	EG	CG
Running 100 m	15,58±0,06	14,35±0,08	14,24±0,07	14,41±0,09
Running 3,000 m	866,5±9,45	859,6±10,37	835,4±6,24*	857,8±8,62*
Shuttle run 4×9	11,45±0,16	10,68±0,12	10,15±0,14	10,47±0,11
Pulling up on the bar high (number of times)	5,74±0,32	6,15±0,47	8,12±0,32	7,96±0,57
Slope from sitting (cm)	23,6±0,78	21,3±0,63	19,8±0,84	16,7±0,89

Differences significant at $p < 0,05$

References

1. J.G. Anikiyenko, *Uchenye zapiski Universiteta imeni P.F. Lesgafta*, 92, 10, 10-16 (2012).
2. Павлова А.С., Лифанов А.Д., Быкова Н.В., Гейко Г.Д., Кечаев В.В., Зенуков И.А., *Вестник Казан. технол. ун-та*, 15, 8, 213-216 (2012).

3. Павлова А.С., Лифанов А.Д., Зенуков И.А., *Вестник Казан. технол. ун-та*, 16, 3, 323-325 (2013).
4. Павлова А.С., Лифанов А.Д., Зенуков И.А., А.Ф. Халилова., *Вестник Казан. технол. ун-та*, 15, 23, 226-230 (2012).
5. Allauddin Shaikh, Dr Samiran Mondal *Journal of Humanities and Social Science*, 1, 2, 1-5 (2012)

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