

Gender Aspects of Stretching Applied to Develop Flexibility in the Classroom of Physical Education in Secondary School

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Abstract: The study presents a version of the training complex of physical exercises based on the method of static stretching of muscles, tendons and ligaments. Gender approach provides differentiation of static stretching exercises of character and optimizes the results of studies. Combined with proper breathing and concentration this stretching complex allows more efficient development of flexibility and gives positive effect on the emotional state of the students.

Key words: Stretching, flexibility, development of schoolgirls, skills physical and emotional relaxation, version

INTRODUCTION

In the last decade, deviations become more visible in the health of older schoolgirls on the background of a significant reduction of motor activity and low motivation to lessons of physical education.

Mandatory form of physical education in school the lessons of physical education on a model curriculum does not meet the deficit of motor activity of students and can not fully solve the problem of improving the health of schoolgirls. One way to improve the efficiency of physical training of girls of 10-11 classes is to optimize the studying process with the introduction of advanced techniques, various traditional and non-traditional means of physical training as well as the use of additional classes (Kutchenko, 2007).

Different dance styles: aerobics, shaping at the same time, the possibility of use of stretching's means have got widespread in physical education senior schoolgirls. As we know the physical condition of girls in many ways differs from that of boys. All the basic functions of the girls' body are focused on the future motherhood. Therefore, the main problem of physical education of schoolgirls at secondary school serves to increase their level of health and the development of physical qualities (Treshcheva, 2005).

Currently with the help of traditional methods we can not successfully meet the challenges posed to the school physical education, so there is a need to create and implement such forms of employment which allow more efficient solving all problems of physical education of girls, primarily health (Walker, 2007).

Stretching as youth movement appears in the 1950s years in the United States. It quickly spread over Europe and became very popular in the sports and health classes. In recent decades in Russia in the theory and practice of physical culture and sports interest in the static exercises of stretching character has been increased. Based on the analysis of specific literature, we can not still have a single definition of this concept. Systematizing the various definitions in our study, under the stretching, we mean a system of physical exercises based on the method of static stretching of muscles, tendons and ligaments.

The overall goal of stretching is the improvement of the body and the flexibility development of it. Systems of exercises include: accelerating the metabolism, increase range of motion in joints, improve posture, prevention of diseases of the spine, internal organs, reducing the risk of injury (Chembarova, 2005).

Performing stretching exercises increases the elasticity of the muscles, tendons, ligaments and joint capsules, improves the functional state of muscles (improves metabolism), acquires skills of deep relaxation. Performing static stretching exercises combined with proper breathing and concentration on stretching muscle group also allows to develop the flexibility the most effective and positive effects on the emotional state of the students.

During static stretching training harmonious and natural development occurs strengthening systems and functions. When skin, muscle, joint ligaments are stretched and corresponding mechanoreceptors are excited this excitation in the form of pulses reaches the

cerebral cortex and causes a reaction in the body. Thus, different ways of stretching cause reflex reaction of the nervous system, improve metabolism. Besides, muscle relaxation neutralizes fatigue, reduces mental stress, improves health, helps to get rid of negative emotions (Anderson, 2000).

MATERIALS AND METHODS

Currently, the specific literature provides a fairly wide range of various kinds of stretching exercises. In our study, we selected 132 exercises that were divided into two groups. The first group includes exercises of the electoral experience for the extension of one or a small number of muscle groups. The second group includes mixed exercises aimed on stretching of consistently different muscle groups.

They were used to form two types of training complexes. First, the impact of the election, forms of the exercises providing stretching of the same muscle groups to give a local but a significant effect on the training value (Galeeva, 2000).

The second type of training is characterized with complex mixed impact. It uses the exercises that act on a specific muscle group. In this case, the training effect will be insignificant for each of these groups.

The duration of exercise is closely related to their intensity and hence with different mechanisms of tension regulation of the stretched muscle. Optimum total duration of stretching exercises is up to 60 sec; the maximum tension is to be 10-15 sec.

The intensity of stretching shall be individually determined. In various exercises, you need to adjust the amount of intensity of exercise due to muscle tension mainly. The various poses that a person takes in the exercises shall be with maximum amplitude to feel the stretching of muscles. If the muscles are still strained, it shall be only increase of the exercise intensity (Walker, 2013; Kamandulis *et al.*, 2013).

The duration of rest interval between reps of the exercise largely determines the magnitude and nature of changes in the body caused by stress. The duration of the intervals between repetitions should be 5-10 sec. The number of repetitions of exercises is 5-7 times. But it also depends on the age of the children, the load duration and the amount of rest intervals (Andersen, 2005).

In the period from December 2013 to February 2014, an empirical research to test the effectiveness of our method (stretching of senior school girls) was made at secondary school no. 11 municipal educational institution in Stary Oskol. Two groups of persons of the attended it, one of which was a control while the other was experimental. Each group has 15 persons. In the control

group, the lessons of physical education were based on comprehensive program for 1-11 grades of secondary schools in the experimental group we used a technique developed by us.

Stretching method for physical education in secondary school with experimental group of schoolgirls was organized as additional lessons, giving additional exercises to the lessons of physical education. In addition to our system, we added some games to stretching exercises.

RESULTS AND DISCUSSION

The effectiveness of the use of means stretching techniques in physical education of secondary schoolgirls was determined based on five indicators of flexibility exercises and six tests of physical fitness.

After the experiment results showed that in the control group, no significant changes in the development of flexibility among females have been recorded and the experimental group exercises control shows reliable increase (Table 1).

As Table 1 shows, the highest increase in the development schoolgirls flexibility in the experimental group occurred in the lumbar and pelvic muscles and thighs, respectively 32.3 and 31.2%. About 20.5% increase in ankle mobility 20% in the shoulder section and 19.5% in the lumbar spine.

The total level of flexibility of senior pupils of the experimental group at the end of the experimental work was significantly higher than the control group schoolgirls with. In the experimental group, it increased from 18.8 points to 23.2 points while in the control group from 18.8-19.2 points (Fig. 1). In percentage terms, this amounted to, respectively -23.4 and 2.1%. All this proves to the effectiveness of methods of flexibility development of schoolgirls of the senior classes using static stretching exercises.

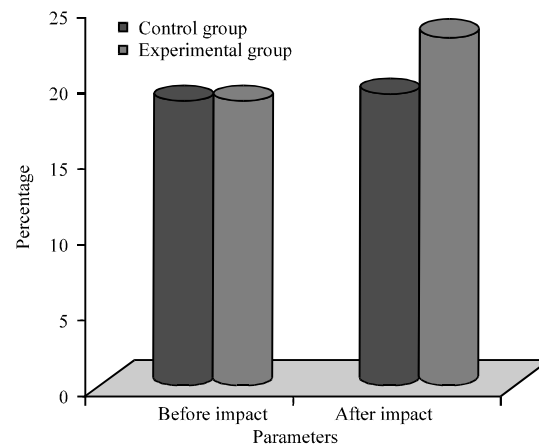


Fig. 1: The flexibility dynamics of school girls

Table 1: Dynamics of flexibility development at schoolgirls (X±Sx)

Indicators inpoints	Experimental group (n = 15)			Control group (n = 15)		
	Before E.I.	After E.I.	p	Before E.I.	After E.I.	p
Ankle-hip muscles	3.9 ±0.55	4.7±0.56	<0.05	4.0±0.72	4.1±0.69	>0.05
"Lotus posture"	3.3 ±0.47	4.3±0.35	<0.05	3.3±0.40	3.2±0.52	>0.05
Lumbar	3.4±0.29	4.5±0.33	<0.05	3.5±0.77	3.6±0.73	>0.05
Thoracic	4.1±0.66	4.9±0.64	<0.05	4.1±0.35	4.3±0.38	>0.05
Shoulder front	4.0±0.78	4.8±0.74	<0.05	3.9±0.62	4.0±0.59	>0.05

CONCLUSION

From pedagogical point of view, it is proved that inclusion of static stretching exercises to preparatory part of the lesson of physical education at secondary school and organizing additional classes of stretching exercises complexes has selective effects on specific areas of the body involved.

The developed method of stretching training of schoolgirls in secondary school proved its effectiveness. Flexibility and mobility in various joints of the experimental group and the results of tests of physical fitness are increased significantly.

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