

# PEDAGOGICAL SCIENCES

## DYNAMICS OF FLEXIBILITY DEVELOPMENT OF STUDENTS OF HIGHER EDUCATION INSTITUTIONS UNDER THE INFLUENCE OF SAMBO FIGHT

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### Abstract

Modern scientific and methodical literature of native and foreign scientists and specialists in the system of physical education who work in the direction of students' flexibility development during the 2004-2017 years of study in institutions of higher education has been reviewed in the article. It has been presented the results of sambo fight effectiveness in the educational process of physical training on the male and female students' flexibility development.

**Keywords:** physical education, flexibility, Sambo fight, institutions of higher education, students.

The period of study at a higher education institution is an essential stage of the personality formation of future citizens of Ukraine. The process of physical education organization in higher education institutions, the use of effective means on the students' body influencing, their interest in systematic exercises are important for the healthy generation upbringing. The process of physical qualities developing plays a special role. The most important is the development of flexibility and mobility in the joints [7, 8, 9].

The topicality of the youth flexibility development proves that it optimizes the educational process of physical training by increasing the acquirement and implementation of complex coordinated movements. A purposeful increase in the range of joint movements as a result of the flexibility development allows to improve the efficiency of some skills and abilities.

One of the main tasks of students' physical education is the development of vital motor skills, skills and abilities in the process of learning and independent training by using innovative technologies [1]. Flexibility, as one of the five physical qualities, is studied by many scholars. N. G. Ozolin proposed the definition of flexibility in 1949: it is the ability of a person to perform motions with a large amplitude. L. P. Matveev understands the flexibility as morphofunctional properties of the locomotor apparatus, which determine the degree of mobility of its parts. In addition, flexibility refers to the elongation of the epiarthral tissues, which provides a normal, or physiological movement of the joint or the limb. The issues of flexibility development are widely covered in modern scientific and methodological literature. Significant contributions to the flexibility improvement technique have been made by such authors as A. G. Shiryayev, N. M. Kovalchuk, V. N. Platonov, M. M. Bulatova, G. P. Gryban [2].

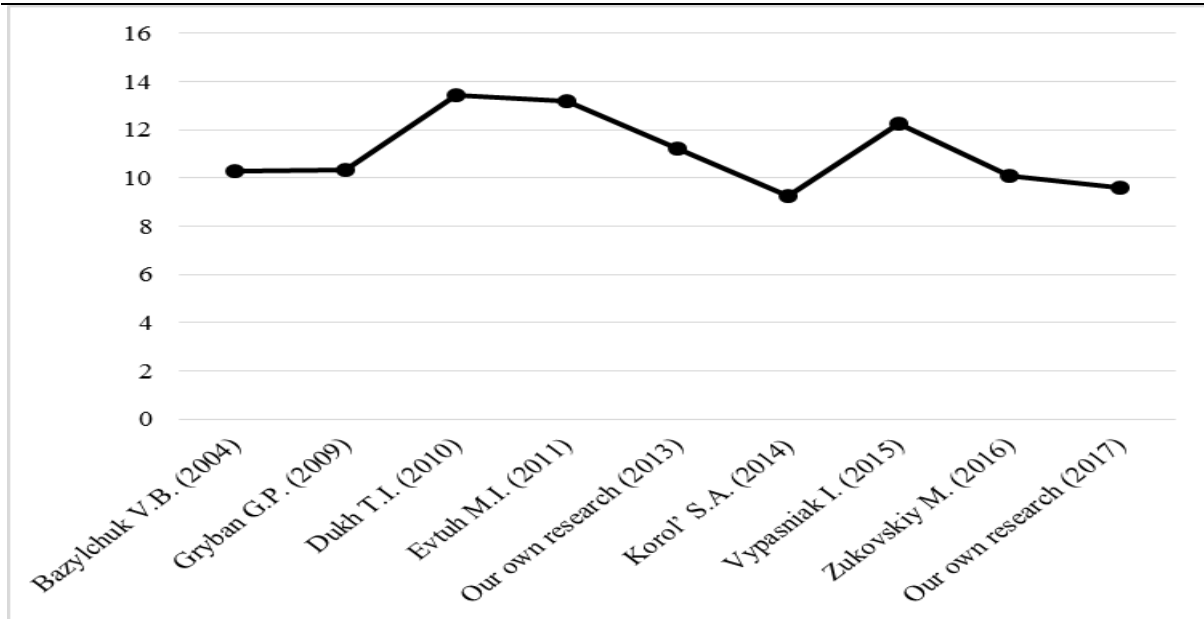
According to B. Anderson, the optimal level of physical activity is determined by a number of factors. Among them are coordination, endurance, agility, strength and mental stability. One of the main factors

of the qualitative movement development is, of course, flexibility. Consequently, flexibility can also play an important role in determining the eventual result in the physical education process. Scientists state [4; 5] that an adequate level of flexibility contributes to the optimization of the process of qualitative movement acquirement and implementation. A purposeful increase or decrease in the range of motion in specific joints for optimal flexibility achievement helps to improve certain skills. Edward T. Hawley, Franks B. Don. [6] prove that the available clinical data confirm the need and reasonability of flexible development programs for the prevention of muscle and connective tissue injuries [3]. And the lack of joints mobility reduces the cost-effectiveness of work and causes the damage to ligaments and muscles. The level of flexibility affects the development of speed, coordination abilities and strength. It is difficult to overestimate the value of joint mobility during correction and prevention of posture and flat foot disorders [2].

In connection with this, the question of expediency improving this particular physical quality arises.

The aim of the work is the analysis and synthesis of scientific and methodological works of specialists and scientists oriented on studying flexibility. It is necessary to investigate the dynamics of the flexibility development of students of higher education institutions of Ukraine during 2004 - 2017 years of study.

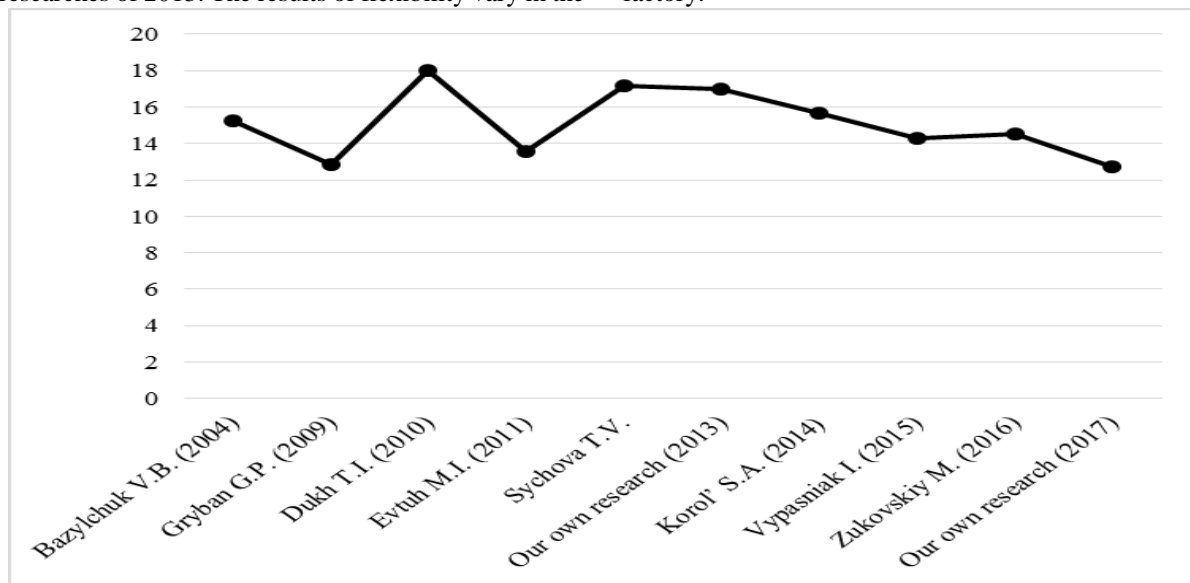
Pictures 1 and 2 show the analysis of Ukrainian scientists of the students' active flexibility dynamics from 2004 to 2017 years in the implementation of the control norm – forward inclination of body from the sitting position. The results show a low level of this indicator. The indicator reached a satisfactory level only in 2010 and 2011. The findings of S. A. Korol in 2014 and our own studies in 2017 show an unsatisfactory level. The analysis of all authors shows that the average result of the students' forward inclination of body from the sitting position is 11.36 cm and is estimated according to a five-point scale as unsatisfactory.



*Pic. 1. Flexibility dynamics of students of higher education institutions*

The results of female students are a bit better than male ones. This tendency is demonstrated by the results of I. T. Dukh (2010), T. V. Sychova (2012) and our own researches of 2013. The results of flexibility vary in the

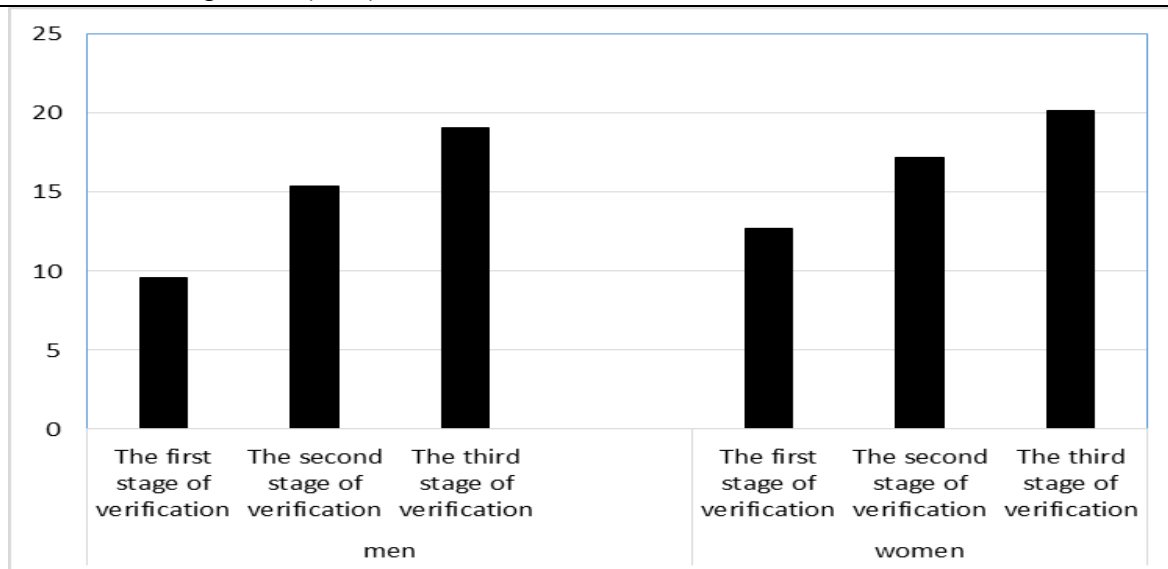
range of 17.01-18.0 cm during this period and are estimated to be satisfactory. The remaining indicators are within 12.7-15.7 cm and they are estimated as unsatisfactory.



*Pic. 2. Female students' flexibility dynamics of higher education institutions*

This dynamics indicates the lack of students' flexibility and the impossibility of traditional methods of conducting classes to improve the level of physical qualities. Therefore, there is a sports-oriented content of training for higher education institutions as an alternative to the traditional method of conducting physical training classes. According to a student survey, an ex-

perimental sambo fighting team has been formed. Taking into account the peculiarities of mastering the technical and tactical actions of the fight, general and special physical training have been included to the educational process. As a result, improvements in physical fitness and, in particular, flexibility have been observed during the first and second year of study (Picture 3).



*Pic. 3. Students' flexibility dynamics with the sport-oriented direction of sambo fighting classes*

The results of students' flexibility of both sexes indicate that classes on sambo fight have a positive effect. Indicators for men at the stage I fluctuate within a satisfactory mark with further improvement at the 2nd and 3rd stages of assessment with excellent scores. Positive dynamics is observed in the indicators of female students. If, at the first stage of the test, the results fluctuate within the limits of the unsatisfactory mark, then it is excellent at the third stage, 20.0 cm.

Based on the results of work it can be argued that the traditional system of physical education can not meet the biological needs of students in motor activity. This tendency has led to inconsistency of students' physical fitness development. The degree of students' flexibility during 2004-2017 years has a regressive dynamics. An alternative to the current system of physical education is the sports-oriented physical education classes in the higher education institutions with an arbitrary choice. The introduction of sambo fight in the educational process of physical training has contributed to the increase of indicators of both physical fitness and flexibility.

The results of this work need further study of this problem, which is necessary for the formation of a more detailed approach to solving the problem of flexibility of students of higher education institutions.

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