

## STUDY THE INFLUENCE OF ATHLETICS EXERCISES ON THE DEVELOPMENT OF MOTOR QUALITIES

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### INTRODUCTION

In modern conditions, the idea of learning in an electronic environment is becoming increasingly important. And in connection with the need to limit the spread of COVID-19 is already perceived that even young students to learn from a distance with digital means. This, on the one hand, allows educational institutions to continue their activities in the current crisis situation. On the other hand, such a way of learning causes some socio-psychological problems in education (Petrova, 2013; Dimitrova, 2017). The question that arises is: is the education system able to meet the young people needs of a healthy lifestyle (Donev et al., 2019; Dimitrova, 2019a; 2020; Vulev et al., 2019; Trendafilov, 2020). Thus, the desire to preserve the health of children in the conditions of a pandemic situation and the statistical indicators of morbidity, bring to the fore the need of physical activity (Trendafilov et al., 2013; Ivanova, 2019a; Dimitrova et al, 2021). Physical activity is a complex indicator of the general functional state of children (Dimitrova, 2018a). It is closely dependent on the degree of development of motor skills and a measure of motor skills. It is determined by gender, age, as well as genetic factors that determine heredity. It is directly influenced by the environment and living conditions, the nature of work, and especially by the volume, specificity, and direction of physical culture and debate. Physical education as a main structural component of physical culture aims to minimize the harmful effects of a stagnant lifestyle on students from the initial stage of basic education (Ignatova, 2021; Chipeva, 2019; Dimitrova, 2019; Yosifov, 2019). One of the most powerful means to reduce morbidity and increase the body's resistance, as well as increase motor and functional activity is to conduct systematic activities with active and purposeful motor activity (Gerova, 2017; Dimitrova, 2018).

The optimization of physical activity is directly related to the proper organization and use of various forms of physical education, as well as the application of appropriate methods and tools for physical activity, consistent with the developing child's body (Dzhambazova, 2004).

The more children move and play, the faster and easier they master the motor skills necessary for their functional development: speed, strength, endurance, flexibility, and agility. In this way, the motor capacity increases significantly, as a result of which the body posture improves and preconditions are created for reducing the occurrence of postural disorders, and hence spinal deformities (Ignatova, 2017; Dimitrova, 2018; Ivanova, 2019a). Primary school age is a period of motor development of the child, in which a positive attitude towards physical education and sports is built. This age group, seven to eight years old, is the youngest generation of the modern workforce, which in turn suggests the need to evaluate new tools and approaches to achieve effective physical activity and social communication (Ivanova, 2019; Miletiev, 2018; Miletiev, 2019; Ignatova et al., 2020; Ignatova, 2020;).

### METHODS

**Purpose** of the study was to trace the effectiveness of athletics, studied in the discipline of physical education and sports (PES) on the development of motor skills of second-grade students.

The experimental training was carried out from September 2019 to February 2020 in the 97th Sofia University "Bratya Miladinovi", and it covers a total of 17 students, of which 5 girls and 12 boys aged between 7 and 8 years. The pedagogical experiment went through three stages: ascertaining, teaching

and control. Although a small number of students from one class are covered, the results can be used as a basis for the development of a larger study based on the following hypothesis:

- If in the process of training (in-class and extracurricular activities) in PCS of second-grade students is applied a system of athletic exercises, will increase the level of development of their motor skills. Opportunities for progress in their motor activity will be provided.

In the training phase, a system of athletics exercises is applied to the students in the PCS classes. The experimental work also includes 5 extracurricular activities with an emphasis on athletics.

At the end of the pedagogical experiment a control section was performed and the results of the students were measured, as the obtained points (maximum number 20) were equated to grades on a 5-point scale (Table 1).

**Table 1.** Twenty (20) points evaluation scale equated in 5-levels

Number of points	Quality assessment
0-3	Unsatisfactory
4-7	Average
8-14	Good
15-17	Very good
18-20	Excellent

Table 2 shows the results of the training for mastering new knowledge, motor skills, and habits, which are equated to established criteria and age standards by gender. A system of control and evaluation determines the general state of the motor capacity of the students.

**Table 2.** Results of the training for mastering new knowledge, motor skills, and habits, which are equated to established criteria and standards for age and gender

Age 8 years								
Boys				Points / evaluation	Girls			
Running 30 m / sec		Jump length from place / cm			Running 30 m / sec		Jump length from place / cm	
from	to	from	to		from	to	from	to
	8,14		92	0-3 / Unsatisfactory		8,41		84
8,13	7,41	93	112	4-7 / Average	8,40	7,7	85	102
7,40	6,12	113	147	8-14 / Good	7,69	6,47	103	134
6,11	5,57	148	162	15-17 / Very good	6,46	5,94	135	148
5,56		163		18-20/ Excellent	5,93		149	

After the empirical measurements, the following results were established, on the basis of which the following estimates were determined:

#### Boys

- Running 30 m / sec - 3 excellent; 3 very good; 4 good, 1 average and 1 unsatisfactory
- Jump length from place / cm - 2 excellent; 2 very good; 5 good; 3 medium

#### Girls

- Running 30 m / sec - 1 excellent; 1 very good; 2 mediums; 1 unsatisfactory
- Jump length from place / cm - 2 very good; 1 good; 2 unsatisfactory

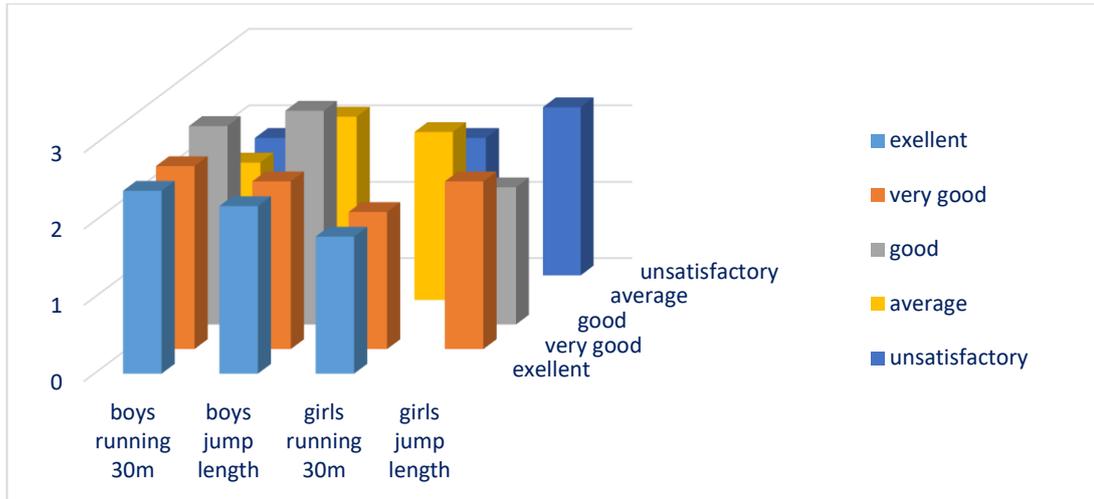
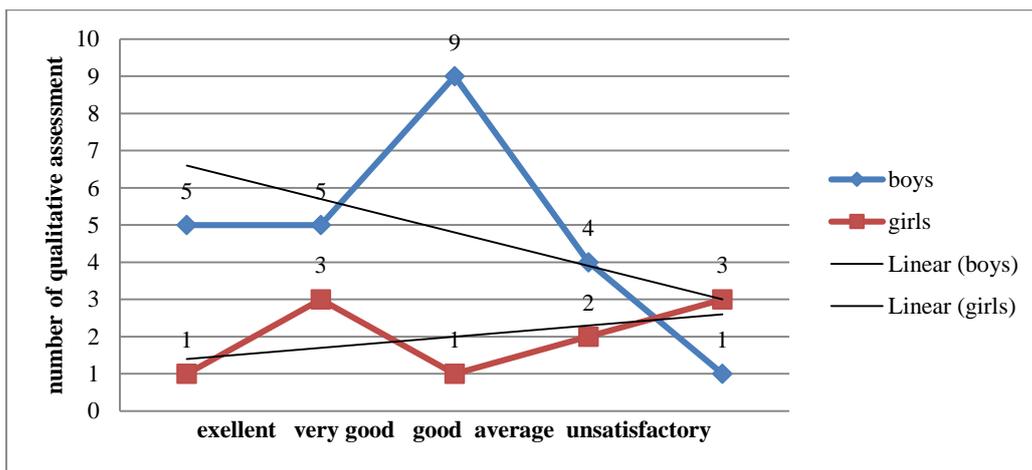


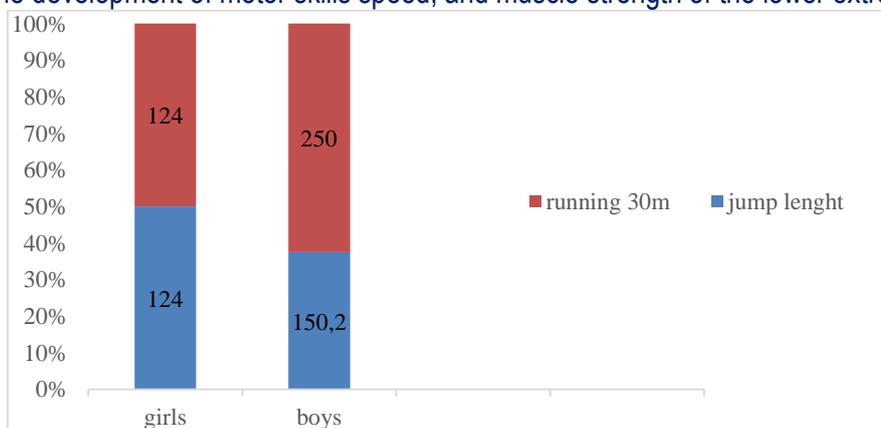
Diagram 1. Results in both disciplines - the "Long Jump" and "30 m running test"

Diagram 1 shows that the boys have better results in both disciplines, as in the "Long Jump" test there are no unsatisfactory results. For girls, there is no "excellent grade" in the same discipline as "average grade", and the share of "very good", "good" and "unsatisfactory" grades is the same. In the "30 m running" test, it was found that the majority of girls find it difficult to meet the average grade.



Graphic 1. Test results for both genders

Graph 1 shows the both genders results. It is evident that boys have higher results than girls, which are decisive for the development of motor skills speed, and muscle strength of the lower extremities.



Graph 2. Test results for both genders in the "30m run" and "long jump"

From the results presented in Figure 2, it is clear that success in both sexes is in a different ratio. For girls, the measurements on the two indicators of physical activity are equal, while boys has excellent results are more in the "30m run" than in the test "long jump". This is due to more frequent athletics classes and poorly mastered techniques in the "two-legged long jump" test, as well as ontogenetic development.

### DISCUSSION

Moreover, this idea turned out to be promising enough, as its realization was in face-to-face training. It was ahead of the situation of online learning in 2020-2021 when children were forced to study at a distance for a certain period of time, which subjected them to some immobilization. However, the results helped the practice, as the system of athletic exercises, which proved its effectiveness in experimental training, was applied again after online training when students returned to school and needed to be stimulated to increase their physical activity. Methodology and assessment of total motor activity. Intermediate measurements were made during the lesson units in order to monitor the progress in the training. At the beginning of each physical education lesson, an appropriate set of general warm-up exercises should be applied in order to prepare all muscle groups for the upcoming motor load. In physical education classes, there should be well-selected by the teacher sets of exercises that will properly develop the individual muscle groups, according to the theme of the pedagogical unit. An important task of the teacher is to properly dose the motor exercises, alternating them with moving games, according to the theme of the lesson, so as not to cause fatigue, and to prevent possible injuries. For greater efficiency in the teaching of physical education it is necessary for the teacher to observe certain gradualness and phasing in the training and mastering of separate methodological units. In physical education classes, the teacher must demonstrate such a technique of performing a certain motor task that students can master it properly in order to achieve better results. It is also borne in mind that the technique of motor exercises is subject to continuous improvement. The applied system of athletics exercises in PCS classes, as well as extracurricular activities allowed to increase general physical training, as well as to stimulate the motor activity of children even after absentee learning when returning to school.

### CONCLUSIONS

The correct dosage of physical activity, as well as the optimal ratio between exercises and games in physical education classes, is of paramount importance to avoid the accumulation of fatigue, which in turn leads to the deterioration of student performance. Warming up is a major stage in training. Special attention should be paid to it in the motor preparation of children so that the individual muscle groups are well prepared for the upcoming motor load. This will prevent the occurrence of possible injuries, whether muscular or musculoskeletal. The principles of gradualness and constructiveness in physical education classes must be applied and observed in order to gradually upgrade the newly acquired knowledge and skills in consolidating previous lessons, which are the basis for further development and improvement of adolescents. There is a differentiation in different mobile games and motor exercises, which are suitable for both the age range and the gender of the students. A report on the results of the study is achieved by stationing the principle of differentiation in learning.

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