

**STUDY OF THE EFFECT OF MORNING PHYSICAL EXERCISES ON THE
PHYSICAL DEVELOPMENT OF PRIMARY SCHOOL STUDENTS BASED ON
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Abstract: This article analyzes the importance of morning physical exercises in the formation process of physical development among primary school students based on experimental research. The results of the study demonstrate the positive effects of physical activity on children's health, agility, endurance, and mental activity.

Keywords: Morning physical exercises, primary education, physical development, experiment, healthy lifestyle.

Introduction

Nowadays, the level of physical activity among school-aged children is significantly decreasing, and a sedentary lifestyle is becoming widespread. This negatively affects children's health, increasing the risk of posture disorders, overweight, cardiovascular diseases, and psychological problems. Particularly, physical education and morning exercises are of vital importance for primary school students.

Morning exercises increase children's morning activity and prepare the body for intellectual and physical activities throughout the day. Furthermore, morning exercises improve psychological well-being, increase stress resistance, and stimulate learning motivation.

Based on this, the current scientific study aimed to examine the impact of morning physical exercises on the physical development of primary school students through experimental research.

Methodology

The research was conducted from September 2024 to January 2025. Participants were selected from second-grade students of three general education schools in Termiz city.

Participants:

Total: 90 students.

Experimental group: 45 students participated in a 10–15 minute morning physical exercise complex daily.

Control group: 45 students maintained their usual daily activities without additional morning exercises.

Exercise complex: The exercise complex included general developmental exercises, light running, hand-foot exercises, stretching, and jumping elements. Each session lasted 10–15 minutes and included:

Exercises to increase body temperature;

Exercises to improve flexibility;

Breathing exercises.

Measurement indicators: At the beginning and end of the experiment, the following criteria were assessed:

Running test (30-meter sprint at maximum speed);

Vertical jump test (measuring jump height);

BMI (Body Mass Index);

PWC-170 test (to evaluate cardiovascular system performance);

Lung capacity (measured by spirometry).

Data analysis: The results were analyzed using statistical methods (mean values, standard deviation, t-test).

Analysis of Results

The findings of the research show that morning physical exercises significantly positively affect the physical development of primary school students.

1. Agility and jumping performance

Students in the experimental group improved their sprint speed by an average of 12% compared to the beginning of the study. Vertical jump height increased by 9%. In the control group, changes were minimal (only about 2–3%).

2. BMI (Body Mass Index)

The BMI indicators in the experimental group remained within the normative range, improving by an average of 0.5 units, indicating healthy body weight and growth alignment. In the control group, signs of overweight were observed in some students.

3. Cardiovascular system indicators

According to the PWC-170 test results, the cardiovascular system performance in the experimental group improved by an average of 15%. Heart rate returned to normal faster after exercise. In the control group, only minimal positive changes (3–5%) were observed.

4. Respiratory system condition

The experimental group showed an increase in lung capacity and respiratory efficiency, improving by an average of 10% according to spirometry results

Conclusion

Based on the research findings, the following conclusions were drawn:

Morning physical exercises have a positive effect on the physical development of primary school students.

Physical activity improves agility, jumping ability, and the functions of the cardiovascular and respiratory systems.

Morning exercises positively influence students' intellectual activity throughout the day, enhancing attention and productivity.

Systematic and compulsory implementation of morning physical exercises in schools can strengthen children's health.

Therefore, it is recommended to integrate morning physical exercises systematically into primary education curricula and ensure their high-quality organization.

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