

## PHYSICAL EDUCATION AND SPORT AS FORMING FACTOR FOR CHILDREN GROWTH IN PRESCHOOL AGE

*(Preliminary communication)*

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### **Abstract**

*The aim of this research is examination of the levels of physical skills in children at preschool. Targets of the research are 58 children, 37 boys and 21 girls both age 6. This paper presents data from a study of tests of physical abilities. These tests were modified in view of the age of the test participants. Conclusions of the research aimed at improving physical development and physical developments of prospective students.*

**Keywords:** *physical education, physical abilities, motor tests, kindergartens, activities outside of class, sports teachers, physical education programs, mean, coefficient of variability.*

The physical education in the continuous educational system is meant to ensure unity and wholeness in development of the singularity and uniqueness of physical and psychological organization of human being, of the intellectual and physical potential which define the originality of each individual. It creates prerequisite for harmonic development, helps for showing of high level of social activity. Physical education as specific activity for people provides their cultural – social status and autonomy in the system of external links and public communications, forming of valuable personal system of thoughts about the world and value orientation.

Physical education in one or another form takes part of the early stages in our educational system – kindergartens. Up to three hours of physical education are included in the studying program in unevenly distributed by means of type of lessons. Music lessons can be attached to physical education lessons conditionally where children's basic education and physical activity are intertwined. In many kindergartens physical education is fulfilled by outclass activities such as football, swimming, martial arts etc. which lessons are lead by sport educators.

Following the development in time and sex is from special value in research of physical skills. This fact is related to many publications which reveal growth or loss in development pace of different skills. Some

authors find specific periods with different intensity of growth in motor skills – periods with raised growth in every indicator and vice versa, periods with zero growth. For example males have highest growth in the ages 4, 6, 8 and 13, less growth in 5, 8 and 16 years of age, and practically zero growth in the ages of 3, 7, 12 and 17. The situation among females is slightly different: highest gain in 4, 6, 9 and 10 years, less growth – 8, 11, 12, and 13 and with minimal – 3, 5, 7, 14-17 (Rachev, 1984). By this age analysis we prove that age of 6 is exceptionally important for both genders by means of dynamics of physical skills and from there the physical education of children.

The aim of this research is examination of the levels of physical skills in children at preschool age and their preparation for elementary school. Targets of the research are 58 children, 37 boys and 21 girls both age 6 from 34<sup>th</sup> kindergarten in city of Sofia, held in May and June 2012 indoors and outdoors.

The participants in the research are divided in two groups – control and experimental, the last consists of children who participate in higher physical outclass activities.

Examined indicators are literature approved physical skills as speed, strength, endurance, agility and flexibility. There are many types of tests and groups of tests for physical skills level determination but they are

not applicable for preschool age. In our research they are modified considering the age features of the participants. Speed is determined by measuring speed skills of children in relay game in which the distance is 2x10m. The measurement is realized by chronometer. The statistics results are shown in table 1.

The speed in the experimental group is higher but the variation coefficient is also higher. The data proofs that there is no significant difference in the level of development of speed skill among children who visit extra outclass lessons of physical activity and children whom physical development and capability are related to physical education lessons only. Hand dynamometry is used for strength establishment. Results are represented in groups without gender differentiation in table 2.

The development of strength capabilities (static force) in children continuously grow and the peak is by the age of 16. At ages 6-7 it is bigger in the experimental group which is expected because bigger part of the group is attending martial arts classes. The variation in both groups is high. Despite that both groups can be

classified as comparatively equal.

Endurance in this age was determined by number of knee bends (squats) for 20 sec. This test determines force endurance (Table 3).

The test proofs equal capabilities of children from both groups, but in this test also like the strength one the variations are big which determine directions for teachers to work with lagging children.

Agility of children at preschool age was determined by successful play actions – ball passing and receiving accuracy – limited to one minute and distance of 50 m executed outdoors. During the test there is forward action of the child which also increases the difficulty of the test. Table 4 describes the results.

Agility is complicated physical skill which requires good coordination in time and space and other developed physical skills. Children at preschool age, no matter from which group, show equal results which corresponds to good work done by the teachers and coaches in their work with the participants in the test.

For flexibility we used forward bending with which we wanted to determine the abilities of the

Table 1. Speed

Group	X	S	mx	As	Ex	V	Max	Min	R
CG	6,56	1,23	0,12	-0,12	0,45	8	6,28	7,01	0,73
EG	6,39	2,12	0,33	0,15	0,22	12	6,12	6,97	0,85

Table 2. Strength

Group	X	S	mx	As	Ex	V	Max	Min	R
CG	8,9	2,72	0,32	0,13	-0,67	30,2	14	4	10
EG	9,9	2,62	0,29	-0,4	-0,5	22,6	15	4	11

Table 3. Endurance

Group	X	S	mx	As	Ex	V	Max	Min	R
CG	13	1,98	0,22	-0,16	0,33	21	16	9	7
EG	14	2,21	0,26	0,15	0,22	15	17	11	6

Table 4. Agility

Group	X	S	mx	As	Ex	V	Max	Min	R
CG	6,7	2,12	0,23	-0,45	0,12	22	8	4	4
EG	6,9	2,25	0,45	0,12	0,55	11	7	5	2

Table 5. Flexibility

Group	X	S	mx	As	Ex	V	Max	Min	R
CG	2,3	2,78	0,23	-0,26	0,21	22	4	-0,5	4,5
EG	2,5	2,52	0,25	0,23	0,45	18	5	-1,2	6,2

children to withstand physical effort caused by external influence during movement with weight on the back. The results are shown in table 5.

The results of this test are pretty equal. They show that children at the age of 6 don't make difference between extra and regular lessons of physical education and sport at kindergartens.

The research results build the foundation for developing standard tables for physical development and capability of children at preschool age. These results compared with the results from examination of physical capability of first grade students are higher than reached levels of physical capability of first grade students. According to research from teachers' opinion for the real physical preparation of first grade students (Bazelkov 2008) more than 2/3 of them share the opinion that these children are not prepared for the requirements of elementary and secondary school.

After short analysis of children achievements at preschool age the following conclusions were made:

1. Physical education and sport lessons at kindergartens are not enough for the approval of physical culture as one of the fundamental movement force for harmonic development of the person
2. The results of the experiments proof the significance of classes developed and represented to children by specialists who have the proper qualification.
3. Need for further research of physical capability of children at preschool age with view for forecasting of the individual differences and in perspective – participants in different teams in different discipline.

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