

## THE SPECIFIC FEATURES OF AGE-RELATED OF AGILITY SKILL IN PRESCHOOL CHILDREN

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**Abstract.** This article demonstrate information on the development of agility in preschool children, taking into account the specific features of age-related development.

**Keywords:** preschool, physical education classes, age-related development of agility, variability of dexterity, agility training.

### ВОЗРАСТНЫЕ ОСОБЕННОСТИ РАЗВИТИЯ ЛОВКОСТИ У ДОШКОЛЬНИКОВ

**Аннотация.** В данной статье демонстрируются сведения о развитии ловкости у дошкольников с учетом особенностей возрастного развития.

**Ключевые слова:** дошкольник, занятия физической культурой, возрастное развитие ловкости, вариативность ловкости, тренировка ловкости.

### INTRODUCTION

Decree of the President of the Republic of Uzbekistan dated December 29, 2016 No. PD 2707 "On measures to further improve the system of preschool education in 2017-2021", September 30, 2017 No. PD-3305 "On the organization of the Ministry of Preschool Education of the Republic of Uzbekistan" New approaches to the system of preschool education, the emergence of new types of issues, require the creation of scientific research and new projects in this area.

### MATERIALS AND METHODS

Not only scientific research aimed at the development of basic physical qualities of children, taking into account their age, but also the modern requirements of the increasingly complex man-made system of preschool education and the process of sports training.

Insufficient study of the relationship between the main manifestations of agility and the functional state of the motor area, the interaction of indicators of agility in exercise, hand and movement activities (locomotor), and the assessment of the ability to move rationally in possible conditions on the basis of an integrated indicator .

The main possibility of developing agility in preschool children, despite the fact that the mechanisms of this process have not been studied, does not lead to the emergence of exaggeration by the authors, which determines the relevance of the topic.

*The purpose of the study.* the agility of preschool children is to develop taking into account the specific features of their age-related development.

*Objectives of the study consists of:*

- Study and analysis of scientific and methodological literature on the peculiarities of the development of agility in preschool children;

- to study and analyze the peculiarities of the age-related development of agility in preschool children;

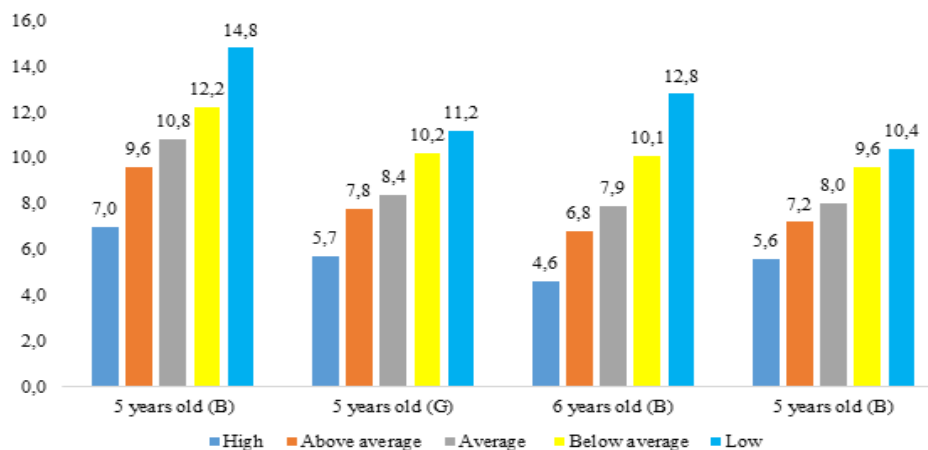
**RESULTS**

The level of development of agility in preschool children is an important condition for the study and improvement of movement games, the ability to quickly adapt to the changing environment in the necessary situations, plays an important role in the types of activities required. Analysis of age dynamics of different manifestations of agility shows that a more rapid increase in agility in hand movements is observed in boys at 5 years of age, and in girls at 6 years of age. The period of rapid growth of agility in movement activities is recorded at the age of 5 years in girls and 6 years in boys. Therefore, it is fair to say that the rapid development of locomotor agility in boys and girls is evidenced by the fact that the age periods do not coincide, showing that this ability has complex characteristics..

**Figure 1.**

**Exercises to assess the ability to move rationally under probabilistic conditions on the basis of the calculated integral indicator**

№	Control criteria	Gender	Age	
			5	6
1	High degree	B	7,0	4,6
		G	5,7	5,6
2	Above average	B	9,6	6,8
		G	7,8	7,2
3	Average degree	B	10,8	7,9
		G	8,4	8,0
4	Below average	B	12,2	10,1
		G	10,2	9,6
5	Low degree	B	14,8	12,8
		G	11,2	10,4



**Figure 1. Manifestations of agility are interrelated with indicators of physical fitness.**

*Interaction of indicators of agility in hand and locomotor activity (locomotor)*

This factor analysis allows us to talk about two types of agility in locomotor activity (locomotor), two of which are less interrelated. However, this leads to the conclusion that there is no connection between them.

Reliable interactions were more common in 5-year-old girls: total reaction time and moxibustion in the moxibustion run at 2x5 m ( $r = 0.846$ ) and in moxibustion with cubes ( $r = 0.434$ ).

In boys of the same age, a single correlation was found between the reaction of motor activity and agility in running ( $r = 0.784$ ) (Table 2).

In 6-year-old girls, there was a significant correlation between the "central delay" ( $r = 0.820$ ) in normal conditions and in the 2x5 m moccasin run, and in boys of the same age - between the movement reaction and the "central delay" ( $r = 0.854$ ). . A large number of reliable connections were found in the manifestation of agility in hand and movement activities.

In 6-year-old girls, there was a significant correlation between the "central delay" ( $r = 0.820$ ) in normal conditions and in the 2x5 m "shuttle run", and in boys of the same age - between the movement reaction and the "central delay" ( $r = 0.854$ ). A large number of reliable connections were found in the manifestation of agility in hand and movement activities.

Among the traits analyzed in 6-year-old boys, only one correlation was identified: the duration of the motor reaction was correlated with "central delay" ( $r = 0.854$ ).

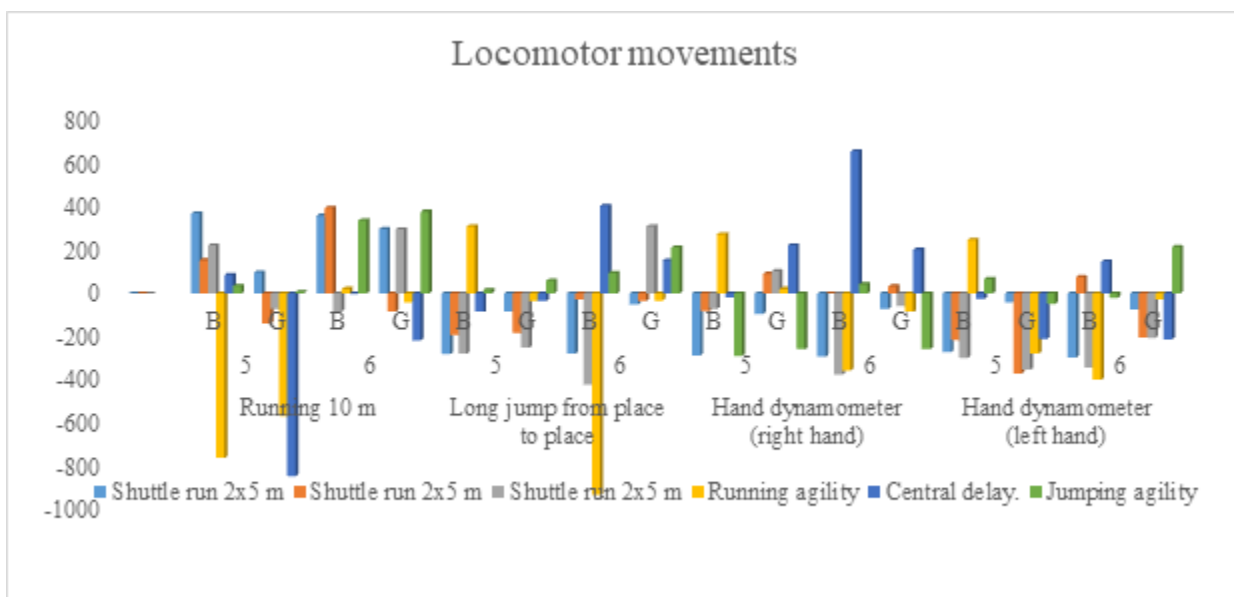
In 5-year-old children, the duration of the motor activity reaction results in a correlation between the frequency of hand movements ( $r = 0.623$ ) and the object movement reaction ( $r = 0.767$ ) under normal conditions.

**Table 2.**

**The main manifestations of agility are the functional state of the motor area of preschool children correlation with indicators**

Indicatorsofmobility	Age	Gender	2x5 m (Under normal)	Shuttle run 2x5 m (Optional)	2x5 m (With)	Runningagility	Centraldelay.	Jumpingagility
Running 10 m	5	B	369	153	221	-760	85	34
		G	97	-139	-72	-567	-845	7
	6	B	359	395	-85	21	-2	337
		G	297	-87	296	-41	-218	378
Long jump from place to place	5	B	-281	-192	-279	309	-90	16
		G	-87	-184	-250	-35	-36	60
	6	B	-279	-28	-421	-930	405	94
		G	-52	-34	309	-34	152	212
Handdynamometer (righthand)	5	B	-287	-82	-71	273	-18	-289
		G	-95	91	102	21	222	-258
	6	B	-292	.004	-376	-356	656	42
		G	-71	33	-58	-87	202	-257
Handdynamometer (lefthand)	5	B	-271	-215	-299	247	-26	66
		G	-42	-371	-353	-278	-211	-48

	6	<b>B</b>	-297	76	-343	-399	147	-21
		<b>G</b>	-75	-203	-205	-27	-212	215



Note: Significant correlations were identified and the correlation coefficients were multiplied by 10.

Significant interactions between the indicators of agility in action activities on our part: The correlations between the results of shuttle run in normal conditions ( $r = 0.859$ ) and “central delay” ( $r = 0.933$ ) in normal conditions were determined within the framework of agility indicators in motor activities.

The analysis showed that in 6-year-old girls (twenty-five) compared to boys (eleven) there is a large reliable correlation between the individual manifestations of agility in hand and movement activities. In 5-year-old girls, the most significant correlations between manual agility indicators were identified.

Thus, the interrelationships between the initial key indicators in terms of the structure of actions are revealed. This study showed that the developmental indicators of agility in hand and movement activities in preschool children are different and are mechanisms that ensure individuality.

Factors influencing the end results of psychomotor activity belong to two main groups according to different purpose.

When setting the first group psychomotor task, first of all, it should include the conditions of activity, which are determined by the quantity and quality of information received by the child.

The second group of factors should include the requirements for the quality of movement (speed, timeliness, accuracy, coordination difficulty) and a complete understanding of the characteristics of the response to the movement activity.

The data presented showed that the specific features of psychomotor function are mainly determined by the factors assigned to the first group. In our view, decision-making is important and crucial, and executive activity is less specific.

*Indicators of agility in children under the influence of physical development*

Analysis of the interrelationships of physical development with the manifestation of agility in locomotor activity (locomotor) allowed to distinguish the following features in preschool children.

No reliable correlations were found between body length indicators and different manifestations of arm and locomotor agility in 5–6-year-old boys.

In 5-year-old girls, body length is calculated by the time of the movement reaction ( $r = -0.642$ ), and in 6-year-olds - by the frequency of hand movements ( $r = 0.805$ ) and the total time of the reaction ( $r = -0.689$ ).

In girls, the effect of agility on various manifestations of growth characteristics increases with age, while in boys, on the contrary, decreases.

A similar relationship can be seen between body weight and agility indicators. The analyzed feature does not affect the manifestation of agility of locomotor activity, but separate indicators of hand agility (period of reaction activity, frequency of arm movement) are correlated with body weight of 5 and 6-year-old girls.

In all age-gender groups, a high correlation was found between body length and weight parameters ( $r = 0.80-0.91$ ).

By preschool, the body's large muscles are just beginning to form, so children (especially at age 4) are not yet well versed in the coordination movements in which these muscles are involved. At this time, intensive formation of small muscles begins to occur, which helps to quickly assimilate hand movements. In this way, it is possible to explain the anthropometric characteristics of children with a reliable correlation between the frequency of hand movements, the reaction of the moving object, the total and the reaction time of the movement.

Indicators of children's physical development have a certain effect on the results of different manifestations of agility, but they are not of particular importance when performing movements such as running, jumping and throwing.

#### *Dexterity in the general structure of motor ability*

A comparison of the relationships between physical fitness indicators and different manifestations of agility has made it possible to identify the following characteristic features. In 5-year-old girls, this condition is manifested by the ability to run ( $R = 0.567$ ) and "central delay" ( $r = 0.845$ ), and in boys at this age only by the results of running speed ( $r = 0.760$ ). In boys, the manifestation of agility increases with age, which affects the speed of ability, while in girls, on the contrary, there is a decrease.

In this regard, the 300 m run is very rare: here only one correlation was found with 5-year-old girls with a "central delay" ( $r = 0.751$ ).

In 5-year-old girls, correlation was found with the following indicators: in boys with motor activity (motor) time ( $r = -0.845$ ), and in girls with selective movement object reaction ( $r = -0.588$ ).

In 6-year-old boys, the length of the standing long jump is correlated with the normal motion object reaction time ( $r = -0.846$ ).

An analysis of the relationship between agility and wrist dynamometry showed that there were no reliable correlations in girls.

In 5-year-old boys, wrist strength readings were correlated with selective motion object response ( $r = -0.846$ ), and in 6-year-old boys with movement response time ( $r = -0.879$ ) and "central delay".

As boys grow older, motor activity in boys, i.e., speed and muscle strength, is characterized by interdependencies in these species, while in girls, flexibility is becoming increasingly important. As they get older, the number of reliable dependencies decreases in girls (3 to 7 years), while in boys, on the contrary, it increases (from 4 to 7 years).

### DISCUSSION

Thus, agility in locomotor activity is mainly related to speed, while in the arm - strength and flexibility. As boys master running coordination as they grow older, the positive correlations between activity of similar movements in the biomechanical structure increase, while in girls, this principle is more evident among the indicators of manual dexterity. In boys and girls, there are correlations between the indicators that determine the level of development of basic physical qualities. It is not possible to evaluate each of them as “purely transparent”, so it is necessary to start with the selection of talented swimmers, gymnasts and athletes among preschool children, but in general, it is advisable to select children based on their ability to move.

Thus, as preschool children grow older, it is observed that the correlation between motor skills and mental (intellectual) processes becomes more pronounced.

### CONCLUSIONS

The manifestation of agility can be divided into two subtypes of dependence - hand and motor activity (locomotor). In each type of this agility, it is advisable to distinguish the types of actions related to the conditions of activity in previously known and unexpected situations.

During the age-related development of the organism, the indicators of various manifestations of agility are significantly improved, especially in probable situations, the effectiveness of psychomotor activity increases.

The results of our research serve as a basis for considering agility as a set of abilities based on certain mental (intellectual) and motor abilities of the body's functional systems.

As a result of studying and analyzing the scientific and methodological literature on the specific characteristics of agility in preschool children, it became clear that the assessment of the level of development of this ability is insufficiently developed and there is no clear understanding of scientifically based criteria. In the process of studying and analyzing the specific features of agility in preschool children and its variability with age, it was found that with the age-related development of children, the specificity of different manifestations of agility increases, its structure becomes variable.

The results of the study show age-related changes in the composition of motor skills in preschool children (an increase in the number of factors by 5 years in boys and 6 years in girls). The factor, which can be interpreted as general mobility, contributed the most to the overall change in the sample (43.6–48.7%) and high results were recorded with all tests representing the state of the motor activity area of children aged 5–6 years. The results of the pedagogical research showed that we have achieved the expected effectiveness through the results obtained.

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