

## THE SPECIFIC FEATURES OF AGILITY IN PRESCHOOL CHILDREN

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**Abstract:** According to the Resolution of the President of the Republic of Uzbekistan dated December 29, 2016 No PP 2707 "On measures to further improve the system of preschool education in 2017-2021", September 30, 2017 No PP-3305 on the organization of the Ministry of Preschool Education of the Republic of Uzbekistan emerging, new approaches in the preschool education system require the emergence of new types of issues, the creation of scientific research and new projects in this area [1,2]. Preparation of children aged 5-6 for school education in preschool institutions in accordance with paragraph 2 of the Decree of the President of the Republic of Uzbekistan "On measures to further improve the system of preschool education in 2017-2021" It is planned to carry out planned work on the establishment of 6,100 short-term groups [3]. Considering above-mentioned facts, this article covers the specific features of agility in preschool children and the issues of development taking into account its variation in accordance with their ages.

**Keywords:** preschool education, agility, agility development, coordination complexity of movements, sensomotor reaction, motor skills.

## ОСОБЕННОСТИ ЛОВКОСТИ У ДЕТЕЙ ДОШКОЛЬНОГО ВОЗРАСТА

**Аннотация:** Согласно Постановлениям Президента Республики Узбекистан от 29 декабря 2016 года № ПП-2707 «О мерах по дальнейшему совершенствованию системы дошкольного образования в 2017-2021 годах», от 30 сентября 2017 года № ПП-3305 об организации Министерства дошкольного образования Республики Узбекистан возникающие новые подходы в системе дошкольного образования требуют появления новых видов проблем, создания научных исследований и новых проектов в этой области [1,2]. Подготовка детей 5-6 лет к школьному образованию в дошкольных учреждениях в соответствии с пунктом 2 Указа Президента Республики Узбекистан «О мерах по дальнейшему совершенствованию системы дошкольного образования в 2017-2021 годах» предусматривается проведение плановой работы по созданию 6100 групп кратковременного пребывания [3]. Учитывая вышеизложенное, в данной статье рассматриваются особенности ловкости у детей дошкольного возраста и вопросы развития с учетом ее возрастной изменчивости.

**Ключевые слова:** дошкольное образование, ловкость, развитие ловкости, координационная сложность движений, сенсомоторная реакция, двигательные навыки.

## INTRODUCTION

Uzbekistan has been paying great attention to the development of physical education and sports in preschool education over the past three decades. In Uzbekistan, targeted work is being conducted, such as comprehensive development of preschool children, qualitative preparation for school education in the system of preschool education. Today's scientific and technological progress has significantly changed the nature of the requirements for human mobility that requires the identification and solution of priorities for children who enroll in physical education. In

different types of activities (physical education, sports, industry, domestic), efficiency is of particular importance not only with the general level of physical fitness, but also the ability to use existing mobility. Most of the recommendations on the method of cultivating agility are based on practical experience and only the selection has been tested by experience. The main possibility of developing agility in preschool children is not in doubt in any of the authors, although the mechanisms of this process have not been studied. All these served to determine the direction of our research.

### **MATERIALS AND METHODS**

This article analysis scientific and methodological literature, observation, interviews, surveys and mathematical-statistical analysis, and the aim of the study is the development of specific features of agility in preschoolers, as well as in terms of objectives of the research, they are the followings:

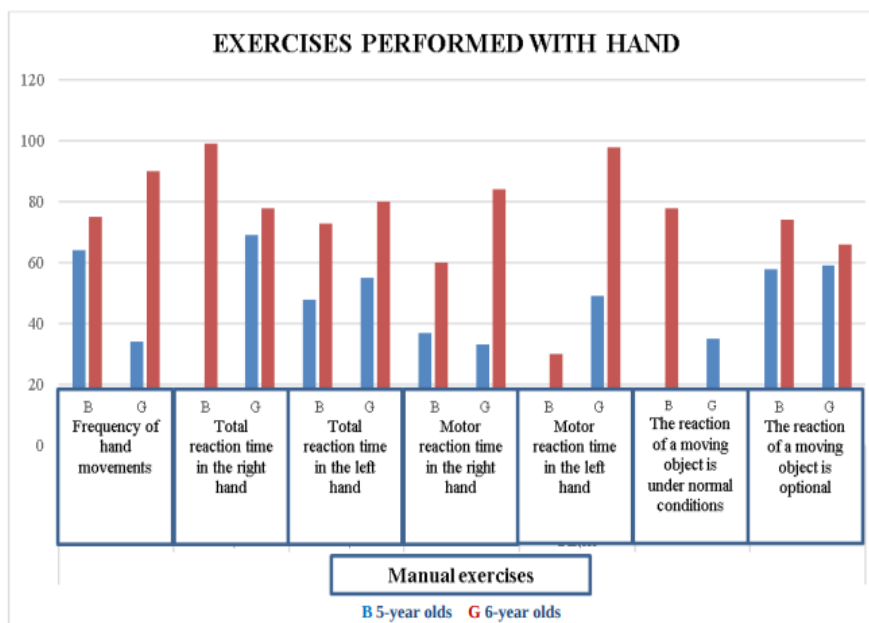
- to study and analysis of the literature on the specifics of agility in preschool children;
- to master and analyze the age variability of the development of agility in preschool children;

The level of development of agility in preschool children is of paramount importance 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 required types of activities [5,6,7,8]. In the theory of modern physical education, various data on the nature of agility, its structure and age-specific features of its manifestation are insufficiently developed to assess the level of development of this ability in sports and labor activities, and there is no clear understanding of scientifically based criteria. The coordination complexity of movements is the first measure of agility. If the spatial, temporal, and force properties of the motion correspond to the motion function, that is, if the motion is sufficiently precise, the motion function is performed. The concept of motion accuracy consists in the accuracy of the spatial, temporal, and force properties of motion. Motion accuracy is the second measure of agility [4].

Therefore, many local and foreign experts view agility as a set of movement activities or a set of specific skills. The definition of ability is rare. He believes that the main measure of agility is space and time. A measure of agility is the shortest time required to find and accurately respond to the desired response in the event of a sudden 102 B 5-year olds G 6-year olds change in operating conditions [7]. The reliability of many exercises increases with age, which indicates that in the children of the pre-school group, the technical characteristics of the movements need to be further strengthened. The study did not find significant differences in the reliability of analyzed exercises in boys and girls. In preschool children, the coefficients of objectivity vary widely: in one exercise (normal and probabilistic 2x5m jogging) moderate ( $r = 0.72-0.82$ ), and in the other (sensomotor reaction, XOR simple and selective frequency of hand movements) , long jump without standing) high enough ( $r = 0.83-0.92$ ). The validity of the calculated integral indicator of the level of development of rational mobility in possible conditions was examined on the basis of comparison with data from experts who expressed their views on the relevant abilities of children [4,5,6,7,8].

The study of all types of agility required the creation of a system that would reduce all manifestations of this ability to the smallest possible number of typical types. This can be done by studying the structure of this ability by identifying the interrelationships between the different manifestations of agility ability.

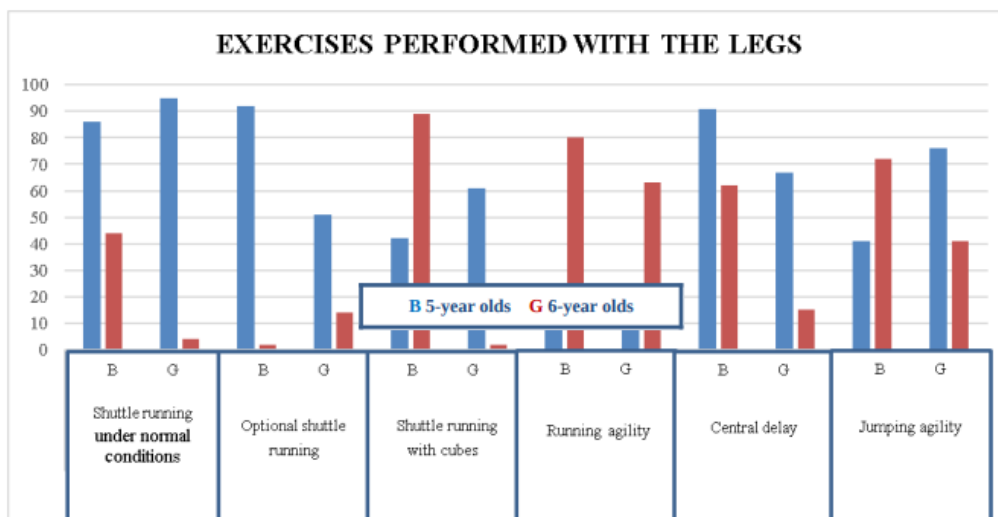
Figure-1



**Agility indicators in the process of exercises done by hand.**

In 5–6-year-old boys and 4–5-year-old girls, the indicators characterizing agility in pre-existing conditions and probable situations differed in one common factor. In our study, an example of the gradual stratification of the structure of motor skills with age was clearly revealed. In preschool children, the main types and manifestations of agility are more clearly reflected in the general structure of motor skills (Table 1). Indicators of locomotor agility in 6-year-old boys were included in a single common factor, along with tests describing different aspects of physical fitness. This pattern is also observed in 5-year-old girls, only at 6 years of age the main manifestations of locomotor agility are divided into two factors: locomotor agility in unusual and probable situations, but under pre-determined conditions.

Figure-2



The analysis of the general structure of motor ability divided agility into two main types - hand and locomotor, in which some indicators related to the conditions of motor 104 B 5-year olds G 6-year olds activity and specific features of psychomotor functions gradually appear with age growth and motor experience. We studied the body length and weight of children aged 5 to 6 years.

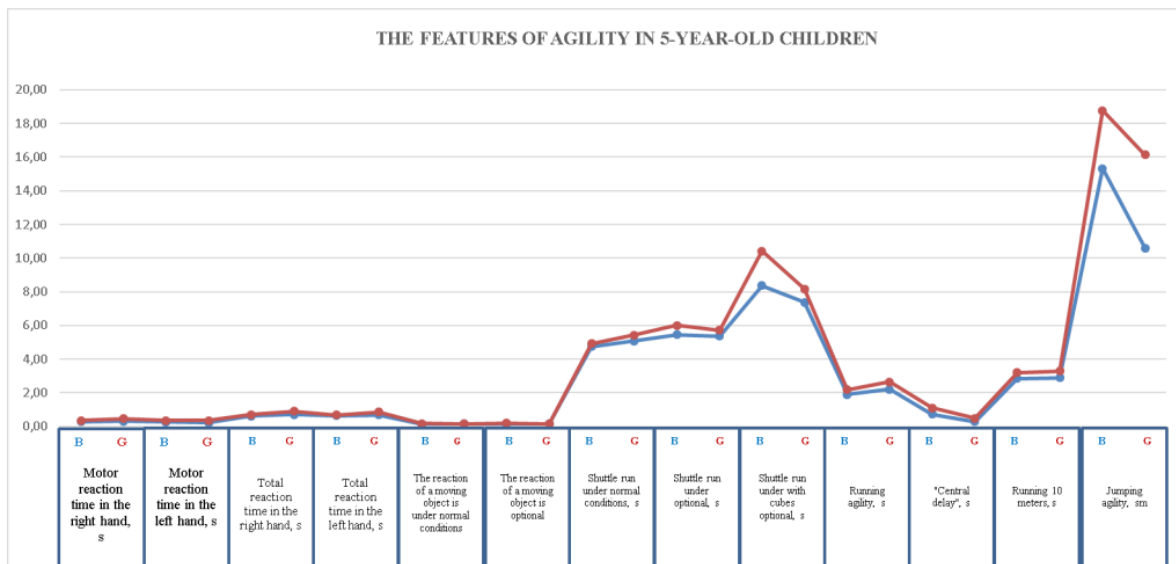
## RESULTS AND DISCUSSION

There is a high correlation between body length and weight between the ages of 5–6 years, as in girls ( $r = 0.881-0.932$ ,  $p < 0.01$ ), and in boys ( $r = 0.860-0.904$ ,  $p < 0.01$ ). In boys, body length and weight are more varied with age (coefficient of variation increases), while in girls, on the contrary, they are less prone to fluctuations. The level of development of physical qualities in preschool children increases steadily with age: significantly improves speed (boys - 21.4%,  $r < 0.001$ ; girls - 26.4%,  $r < 0.001$ ), endurance (children - 11, 9%,  $r < 0.05$ ; girls - 61.9%,  $r < 0.001$ ), speed and power (boys - 54.6%,  $r < 0.001$ ; girls - 29.3%,  $r < 0.01$ ) and strength (boys - 45.2%,  $r < 0.01$ ; girls - 58.4%,  $r < 0.001$ ) training, flexibility (forward bending of the body) improved by 7.0 cm in boys and 2.1 cm in girls. This study showed that as children's bodies develop with age, their agility indicators improve significantly. In preschool children, the development of agility taking into account age-related features is important (Table 1). In preschool children, the total time response decreases steadily with age (4 to 6 years) in boys (0.80 s to 0.52 s) and in girls (0.93 s to 0.54 s). The latent period of action lasts for more than half of the total reaction time (54.8 to 62.3% in boys and 51.8 to 68.1% in girls). The duration of the sensory period decreases reliably with age (0.47 s to 0.20 s in boys and 0.35 to 0.28 s in girls). Also, the reaction time of motor activity decreases with age (from 0.33 s to 0.22 s in boys and from 0.58 s to 0.26 s in girls).

Table-1

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№	Indicators	Gender	Age			
			5		6	
			X	&	X	&
1	Motor reaction time of the right hand, (second)	B	0,28	0,06	0,22	0,03
		G	0,31	0,14	0,26	0,04
2	Motor reaction time of the left hand, (second)	B	0,27	0,07	0,20	0,07
		G	0,22	0,12	0,24	0,05
3	Total reaction time of the right hand, (second)	B	0,62	0,08	0,52	0,04
		G	0,71	0,20	0,54	0,04
4	Total reaction time of the left hand, (second)	B	0,63	0,04	0,55	0,17
		G	0,69	0,16	0,56	0,05
5		B	0,12	0,06	0,15	0,17
	The reaction to a moving object is normal condition	G	0,14	0,02	0,09	0,04
6	Optional reaction to a moving object	B	0,13	0,07	0,13	0,03
		G	0,14	0,02	0,13	0,07
7	Shuttle running under normal conditions, (second)	B	4,74	0,17	4,60	0,17
		G	5,08	0,34	4,53	0,10
8	Optional shuttle running, (second)	B	5,46	0,54	4,84	0,11
		G	5,36	0,35	4,86	0,25
9	Shuttle running with optional cubes, (second)	B	8,36	2,07	6,26	0,33
		G	7,38	0,78	7,20	0,72



Thus, in preschool children, the overall reaction time changes in response to an improvement in the latent period, as well as a decrease in the duration of the motor activity reaction. The greatest growth period of the latent reaction was 5 years in boys (16.0%,  $r < 0.05$ ).

The normal response (XOR) to a moving object varies with age (0.22 to 0.13 s in boys and 0.21 to 0.09 s in girls), with the best periods of improvement in this feature occurring in boys at 5 years of age (27.8%,  $r < 0.01$ ) and in girls at 4 years of age (22.2%,  $r < 0.01$ ). In 5-year-old children, a high increase in CHOR is observed in probable conditions (in children - 27.8%,  $r < 0.01$ , in girls - 36.4%,  $r < 0.01$ ). In preschool children, various manifestations of motor agility also improve with age. Under normal conditions, the greatest periods of change in the performance of moxibustion at 2x5 m are observed in boys (5.7%,  $r < 0.05$ ) and girls (8.8%,  $r < 0.05$ ) at the age of 5 years. Indicators of agility in running (the difference between the results of a 2x5 m run and a 10 m run under normal conditions) in boys at 5 years (7.6%,  $r < 0.05$ ), in girls at 6 years (12.8%,  $r < 0, 05$ ) The largest growth varies intensively. The largest increase agility results in jumping (difference in long jump with or without hand support) was observed in girls at 4 years of age (22.5%,  $r < 0.05$ ), and in boys at 5 years of age (40.4%,  $r < 0, 01$ ) is observed. In girls at the age of 5 years in probable conditions shuttle run to 2x5 m (15.7%,  $r < 0.05$ ), central delay (73.2%,  $r < 0.01$ ), mokkis running with cubes (14.8%,  $r < 0,05$ ) was found to have the highest rate of growth in boys aged 6 years (6.0%,  $r < 0.05$ ; 50.0%,  $r < 0.01$ ; 14.5%,  $r < . 0.05$ , respectively). 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.

### CONCLUSION

As a result of studying and analyzing the 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 structure 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 can be interpreted as

total mobility, contributed the most to the overall change in the sample (43.6–48.7%) and gave high results with all the tests representing the state of the motor activity area of children aged 5–6 years.

In the experimental group, the differences between the initial and final indicators describing motor skills were significant in 5% of the 31 cases out of 62, while in the control group - only in 21 - the groups did not differ significantly at the beginning of the study. The results of our pedagogical research justified that we achieved the expected effectiveness.

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