A set of rhythmic gymnastics exercises for developing fine motor skills in girls aged 5–7

https://doi.org/10.65149/eajss.2026.v6i5.a002

[1]Nurmukhammadova Yoqut Nurmukhammadovna
[1]Namangan state institute of foreign languages named after Is'hoqxon Ibrat
Namangan, Uzbekistan

Abstract
This article illuminates the scientific and practical foundations of the methodology for using active games to develop motor skills in preschool-aged girls. The study analyzes the pedagogical significance of active games in preschool education, particularly their role in ensuring children's physical development, increasing motor activity, and forming fundamental motor skills. Additionally, it highlights the principles for selecting active games according to children's age-related, individual, and psychophysiological characteristics, as well as the scientific basis for their methodological integration into the educational process. The research employed methods such as scientific literature analysis, pedagogical observation, pedagogical experimentation, and mathematical-statistical analysis. The results demonstrated that the developed methodology significantly enhances the level of coordination, balance, agility, speed, flexibility, and overall motor preparedness in preschool-aged girls.
Keywords: preschool education, preschool-aged girls, motor skills, active games, physical development, motor activity, physical education, motor development, scientific and practical foundations.

Introduction

Improving the preschool education system, ensuring the comprehensive and harmonious development of children, and fostering a healthy lifestyle are priority directions of state policy in our country. Consistent reforms are being implemented in preschool educational organizations aimed at organizing the educational process based on modern pedagogical technologies, supporting children's physical development, and increasing their motor activity. In this process, developing motor skills while considering the age and individual characteristics of children is recognized as a scientifically and practically urgent task.

A set of exercises, developed using rhythmic gymnastics equipment to enhance fine motor skills, has been systematically designed, with its content tailored to the age and psychophysiological characteristics of children. This exercise program cohesively details the performance techniques, methodological recommendations, and the volume of physical load. The exercises primarily consist of movements performed with a hoop, which promote the development of fine motor skills by improving the function of the hands, fingers, wrist, and shoulder joints.

The technique for each exercise is described step-by-step, enabling children to master the movements correctly and perform them consistently and safely. Elements such as assuming the starting position, continuing the movements rhythmically, and correctly returning to the final position are outlined with methodological consistency. This approach not only increases the effectiveness of the exercises but also supports the continuous development of precision, speed, and coordination in hand movements.

Specifying the number of exercise repetitions and rest intervals separately in the table allows the training load to be distributed according to the functional capabilities of preschool-aged children. This ensures the exercises are performed with high quality and active participation, preventing excessive fatigue. A gradual increase in the number of repetitions positively impacts the improvement of children's physical fitness and the strengthening of motor skills.

Methods

The organizational and methodological instructions provided in the table are of great importance for the effective organization of sessions. In particular, recommendations on maintaining correct posture, performing movements rhythmically, using equipment properly, and performing each exercise under supervision help to form discipline, attentiveness, and a culture of movement in children. This methodological approach not only ensures the development of fine motor skills but also has a positive effect on developing aesthetic taste, the ability to maintain balance, and spatial awareness.

Results and discussion

Table 1. .**A set of exercises for developing fine motor skills in 5-7 year old girls using rhythmic gymnastics equipment** *1-part*

Exercise focus	Exercise name	Exercise technique (divided into 4 phases)	Number of repetitions	Rest interval	Organizational and methodological guidelines
Hand movement with the hoop	Rotating the hoop with one hand	1. The ring is held in front with one hand. 2. Swing the ring with a rightward motion. 3. Swing the left hand; the palm and left finger move. 4. The ring is continuously rotated in one hand through rhythmic swinging motions of the palm to the right and left.	6-8 times	20-30 seconds	Maintain a correct body posture and keep the palms straight.
	With the ring in two hands (in both right and left directions)	1. Starting position: rings held in front with both hands. 2. Rightward rotation with both hands. 3. Leftward rotation with both hands. 4. Continuous rotation in two directions alternately.	4-6 times	10-20 seconds	Maintain your balance and keep your body upright while holding the rings.
	Rotating the ring in the lateral plane	1. Hold the hoop in one hand in the lateral plane. 2. Rotate in the lateral plane with one hand. 3. Hold the hoops in both hands laterally. 4. Rotate simultaneously in the lateral plane with both hands.	8-10 times	30-40 seconds	Keep your torso upright. Perform the movement synchronously, rhythmically, and under control.
	Palm spin	1. Starting position: hoop held in the palm. 2. Initiate the spin along vertical or horizontal axis. 3. Release the palm and allow free spin. 4. Catch the hoop and repeat rhythmically.	10-12 times	40-50 seconds	Extend your arms straight and balance the hoop on your palms.
Hand movements with the hoop	Rolling the hoop along the ground	1. Roll forward. 2. Roll backward. 3. Roll to the side (right or left). 3. Roll along an arched path.	4-6 times	20-30 seconds	Pay attention to your hand movements when rolling the hoop.
	Rolling the hoop in reverse on the ground	1. Starting position: place the hoop vertically on the ground with one hand. 2. Apply light pressure to the outer part with the finger. 3. Extend the hoop forward without lifting. 4. Pull back sharply to roll the hoop in reverse.	8-10 times	40-50 seconds	Maintain your balance and move the hoops correctly.
Hand movements with the ball	Passing the ball from hand to hand	1-2: Raise arms, pass to left; 3-4: Lower arms; 5-6: Pass forward to right; 7-8: Return to starting position.	4-6 times	30-40 seconds	Pass the ball precisely and do not drop it.
	Passing the ball from hand to hand while lowering	1-2: Sit back on heels and pass to left; 3-4: Return to kneeling; 5-8: Repeat with other hand.	6-8 times	20-30 seconds	Maintain balance on your heels and do not drop the ball.
	Complex passing exercises	1-2: Turn right, place ball between feet; 3-4: Turn left, return to kneeling; 5-6: Turn left, pass with left hand; 7-8: Return to starting position.	4-6 times	30-40 seconds	Maintain balance on your knees and extend your arms precisely.
		1-2: Bend legs, place ball between feet; 3-4: Arms to sides; 5-6: Take ball with left hand; 7-8: Straighten legs, arms to sides. Repeat with other hand.	8-10 times	20-30 seconds	Do not drop the ball from between your feet and maintain your balance.
	Ball dribbling exercises	1. Bounce ball vertically with one hand. 2. Observe the return of the ball. 3. Catch with the same hand and repeat with the other hand. 4. Bounce 8-10 times consecutively, alternating hands.	4-6 times	30-40 seconds	Maintain your balance and hold your breath.

The *"hoop turning"* exercise is one of the most effective methods for developing fine motor skills in girls aged 5–7. This exercise ensures the coordinated movement of the hand, fingers, wrist, and elbow joints. In the initial stage, holding the hoop correctly in one hand and gripping it firmly with the palm allows children to control the object and activate their finger muscles. In subsequent stages, rhythmically swinging the hoop to the right and left in-

Table 2. .**A set of exercises for developing fine motor skills in 5-7 year old girls using rhythmic gymnastics equipment** *2-part*

Exercise focus	Exercise name	Exercise technique (divided into 4 phases)	Number of repetitions	Rest interval	Organizational and methodological guidelines
Hand movement with the ball	Ball throwing and catching exercises	1. Starting position: stand upright, hold the ball with both hands in front. 2. Throw the ball forward and upward. 3. The ball bounces off the ground. 4. Catch the returning ball with both palms and repeat 8–10 times.	2-4 times	20-30 seconds	When bouncing the ball, be sure to catch it on its return.
Hand movement with the ribbon	Swing the ribbon in the frontal plane	1. Starting position: ribbon on the right side in the right hand; feet shoulder-width apart, gaze forward. 2. Swing left and down; the tip lightly touches the ground. 3. Swing up to the right in an arc. 4. Return to starting position. Repeat rhythmically.	4-6 times	30-40 seconds	Keep your torso upright and the ribbon taut when swinging it.
Arm Movement with the Ribbon	Vertical Snake (in the air)	1. Stand upright; hold ribbon in the right hand with the stick as an extension of the arm at shoulder height. 2. Create a vertical snake pattern in the air using small wrist movements. 3. Keep the stick as a continuation of the arm; do not lift it vertically to avoid wrapping the ribbon. 4. Continue the vertical snake movement rhythmically without pause. Perform first with the right hand, then with the left.	8-10 times	30-40 seconds	Try to keep the ribbon high and maintain your balance.

creases wrist joint mobility and develops the precision and fluidity of hand movements. The sequential and active involvement of the fingers improves differentiated movements, which is a crucial component of fine motor skill development.

Repeating the exercise 6–8 times with a 20–30 second rest between each repetition helps to regulate the workload according to the children's age-specific characteristics and physical abilities.

This approach ensures the gradual formation of motor skills while preventing excessive muscle strain. The organizational and methodological instructions emphasize maintaining an upright posture and keeping the palms in the correct position. This positively influences the biomechanical correctness of the movements, helps maintain balance, and promotes the development of coordination skills.

The exercise *"Twirling the hoop with both hands in two directions (in opposite directions with the right and left hands)"* is highly beneficial for developing fine motor skills in 5- to 7-year-old girls, particularly the precision and coordination of hand and finger movements. The simultaneous, active participation of both hands during the exercise improves motor control, a sense of rhythm, and coordination skills. Alternately twirling the hoop in right and left directions activates the forearm and palm muscles, shaping the delicate movements necessary for fine motor skill development. Repeating the exercise 4–6 times with a 10–20 second rest between repetitions ensures the workload is appropriate for the children's age.

While performing the exercise, maintaining an upright posture, keeping balance, and holding the hoops correctly contribute to the proper and effective execution of movements, and also positively impact the development of general physical fitness and coordination abilities. Overall, this exercise serves to develop children's fine motor skills, attention, movement precision, and bilateral coordination.

The *"Spinning the Hoop on a Lateral Plane"* exercise is one of the most effective methods for developing fine motor skills, hand-eye coordination, and the precision of forearm movements in girls aged 5–7. During the exercise, the rhythmic oscillations of the palms activate the hand muscles and enhance the ability to control and coordinate movements.

While movements performed with one hand improve individual control and precision, simultaneous rotations with both hands develop movement synchronicity and bilateral coordination. Repeating the exercise 8–10 times with a rest interval of 30–40 seconds ensures the load is appropriate for the children's age and prevents excessive fatigue. Performing the exercise with an upright posture, using rhythmic and controlled movements, positively impacts balance, the development of coordination skills, and the formation of motor culture.

The *"Hoop Rolling"* exercise helps develop fine motor skills in girls aged 5–7, especially the ability to manage and control hand and finger movements.

During the exercise, children develop planning, spatial orientation, and coordination skills by rolling the hoop forward, backward, sideways, and along a designated path. Constantly controlling the direction and balance of the hoop's movement increases arm muscle activity and positively impacts the improvement of fine motor skills. Repeating the exercise 4–6 times with a 20–30 second rest after each set provides an age-appropriate workload for the children. Focusing on hand movements during the rolling process develops precision, rhythm, and control, thereby strengthening overall coordinative fitness.

The *"Spin the Hoop Upside Down on the Floor"* exercise is one of the most effective methods for developing fine motor skills, hand-eye coordination, and finger dexterity in girls aged 5–7.

During the exercise, the coordination between the index finger and palm movements ensures the hoop remains balanced and allows for precise control over its direction. Applying light pressure to the hoop and guiding it with a sharp palm movement strengthens arm muscle activity and increases the speed and accuracy of the action. Performing the exercise 8–10 times with a rest interval of 40–50 seconds creates an age-appropriate workload.

The methodological requirements for maintaining balance and executing the movements correctly have a positive impact on the development of coordination, spatial orientation, and motor control. Overall, in addition to developing fine motor skills, this exercise is crucial for improving concentration, controlling movement sequences, and forming the technical skills characteristic of rhythmic gymnastics.

The *"Hand-to-Hand Ball Pass"* exercise helps develop fine motor skills, precision, and hand movement coordination in girls aged 5–7. During the exercise, the muscles of the fingers, palms, and wrists are actively engaged, developing the ability to control movements while passing the ball from one hand to the other. The actions of moving the arms from the sides to the front and back to the starting position help chil-

dren build skills in remembering a sequence of movements, feeling rhythm, and spatial orientation. Repeating the exercise 4–6 times with a 30–40 second rest interval provides a workload appropriate for this age group. The instructional guidelines to pass the ball accurately and avoid dropping it enhance concentration, movement precision, and the coordination of both hands.

The exercise *"Passing the ball from hand to hand while kneeling on one leg"* is important for developing fine motor skills, precision, and hand-eye coordination in girls aged 5–7. Performing the exercise while kneeling on one leg develops balance and body control, while passing the ball from hand to hand strengthens the muscles of the fingers, palms, and wrists.

The process of sitting down (sitting on the heels) and returning to the starting position ensures a sequence and rhythm of movements, thereby developing coordination. Repeating the exercise 6–8 times with a 20–30 second rest interval creates an age-appropriate workload. The methodical requirements of maintaining balance and not dropping the ball improve concentration and motor control. Overall, this exercise is an effective pedagogical tool for developing fine motor skills, balance, and a culture of movement.

"Complex passing exercises" help develop fine motor skills, coordination, and spatial orientation in girls aged 5–7. During the exercise, turning the torso to the right and left, placing the ball between the legs, and receiving it with the opposite hand ensures the active engagement of the hand, finger, and forearm muscles.

The sequential and rhythmic execution of these movements improves concentration, motor control, and bilateral coordination. Repeating the exercise 4–6 times with a 30–40 second rest interval provides an age-appropriate workload. Methodical instructions on maintaining balance on the knees and passing the ball accurately positively influence the correct execution of movements and the development of coordination.

This exercise, performed while lying on the back, is designed to develop fine motor skills, balance, and coordination in girls aged 5–7 by ensuring the harmonious functioning of the hand, finger, and leg muscles. The sequence and rhythm of movements are established by bending the legs and passing the ball from one hand to the other. Repeating the exercise 8–10 times with a 20–30 second rest interval creates an age-appropriate workload. Methodical instructions on not dropping the ball and maintaining balance develop movement precision and coordination. Overall, this exercise is important for developing motor control and body awareness in children.

"Floor exercises with a ball" are an important tool for developing fine motor skills, hand dexterity, and coordination in girls aged 5–7. During the exercise, bouncing the ball with one hand and controlling its return ensures the active engagement of the finger, palm, and wrist muscles. Tracking the ball's movement and catching it develops attention, quick reflexes, and spatial orientation. Performing the exercise alternately with the right and left hands improves bimanual coordination. Repeating the exercise 4–6 times with a 30–40 second rest interval creates an age-appropriate workload. Methodological guidance on maintaining balance and proper breathing ensures the exercise is performed effectively and safely.

Exercises with a hoop help ensure the continuity of arm movements, maintain balance, and harmonize the activity of both hands. Exercises with a ball develop precision in focus, quick reactions, and fine motor skills. Exercises with a ribbon increase the mobility of the wrist and hand muscles, develop a sense of rhythm, and cultivate an aesthetic culture of movement.

Conclusion

The number of exercise repetitions and rest intervals were determined according to the age characteristics of the children, which ensured a normative distribution of the load and prevented excessive fatigue.

Adherence to organizational and methodological requirements positively influenced the technically correct and safe execution of movements, as well as the development of balance, coordination, and general physical fitness.

Overall, this exercise system, developed using rhythmic gymnastics apparatus, was found to be of significant pedagogical importance for effectively developing fine motor skills, shaping a culture of movement, and enhancing the physical and psychomotor preparedness of girls aged 5–7.

References

Bekmirzayev, M. X. (2023). *Study of the physical development status and age characteristics of young gymnasts*. In *Proceedings of the Republican Scientific and Practical*

Conference "Problems, Solutions and Prospects in the Field of Physical Education and Sports" (pp. 153–156). Chirchiq, Uzbekistan.

Ortikova, M. D. (2025). *Dynamics of changes in the movement preparedness of rhythmic gymnasts*. In *Proceedings of the International Scientific Conference "Current Issues of Mass Sports, Healthy Lifestyle and Gymnastics"* (pp. 106–107). Chirchiq, Uzbekistan.

Ortikova, M. D. (2021). Methods of development of coordination abilities of young rhythmic gymnasts. *Eurasian Journal of Sport and Sciences, 1*(2), 246–249.

Umarov, D. X. (2021). Particularities of movement skills manifestation by young gymnasts at the initial training stage. *Society and Innovations, 2*(5), 163–167.

Karimov, Kh. A. (2023). *Technology for improving the technical preparation of young gymnasts* (Doctoral dissertation for the degree of Doctor of Philosophy (PhD) in Pedagogical Sciences, Specialty 13.00.04 – Theory and Methodology of Physical Education, Sports Training, and Health-Improving Physical Culture). Chirchiq, Uzbekistan.

AUTHOR BIOGRAPHY:

Yoqut Nurmukhammadovna NURMUKHAMMADOVA

Employment

Researcher at Namangan state institute of foreign languages named after Is'hoqxon Ibrat

Degree

MD

Research interests

physical education and sport, Theory of physical education, Analyzing of sport competitions