

Aireal Silks as A Means of Physical Development for Primary School Age Pupils

Drach Tamara Leonidivna,

*Post-graduate student of Lviv State University of Physical Culture named after I. Bobersky,
Faculty of pedagogical education, Department of Theory and Methods of Physical Culture,
a coach-choreographer of the School of Dance and Aerial Acrobatics "Chocolate"*

Abstract. This article examines aerial acrobatics on silks as a modern, innovative method for the physical development of elementary school-aged children. The relevance of this study stems from the deterioration of children's health, the decline in their physical activity levels, and the need to introduce new forms of physical education capable of combining health-promoting, educational, and aesthetic functions. It has been determined that aerial acrobatics on silks is a comprehensive form of physical activity that integrates elements of acrobatics, choreography, gymnastics, theatrical expression, and musical accompaniment, ensuring the harmonious physical and creative development of the child.

This article describes the specific features of organizing aerial acrobatics classes for elementary school-aged children. It outlines the structure of a class, which includes a warm-up, floor exercises, strength training, elements on the silks, stretching, and choreographed routines. Particular attention is paid to game-based teaching methods, which help increase children's interest and facilitate the mastery of complex motor skills. The importance of gradually teaching basic elements is emphasized: climbing onto the silks, wrapping the arms and legs, performing elements on the loop, and simple twists.

The importance of integrating dance training into the process of learning aerial acrobatics has been emphasized. Combining acrobatic elements with dance movements helps develop children's movement skills, artistry, musicality, and aesthetic expression. It has been proven that participation in demonstration performances and competitions has a positive impact on the development of self-confidence, discipline, responsibility, and communication skills.

Special attention is given to the psychological support of children and the interaction between the coach and parents. It is noted that parental support is crucial for fostering positive motivation for training, overcoming fears, and helping children adapt to competitive activities.

The study found that aerial silks is an effective means of promoting the comprehensive physical and creative development of elementary school-aged children and can be successfully incorporated into extracurricular physical education and health programs.

Keywords: aerial silks, elementary school-aged children, physical development, physical education, choreography, coordination, flexibility, strength, extracurricular education, physical activity, acrobatics, aesthetic education.

I. Problem statement.

At the current stage of societal development, the issue of preserving and strengthening the health of primary school-aged children has become particularly urgent. Reduced physical activity, heavy academic workloads, prolonged use of digital technologies, insufficient physical fitness, and poor posture negatively affect children's physical development. Consequently, there is a need to introduce new, engaging, and effective forms of physical activity capable of not only improving children's physical condition but also sustaining their motivation for regular exercise.

II. An analysis of recent studies and publications.

The issue of physical development in children of primary school age is widely covered in the works of contemporary researchers in the fields of physical education, pedagogy, sports science and choreography, such as Bekh I.D. (1993), Sosina V.Yu. (2021) and Todorova V.G. (2018). In the works of A. Nevelyka and O. Sutula (2022), Agans J.P., Davis J.L., Vazou S. & Jarus T. (2019), which are devoted to acrobatics and aerial gymnastics, the positive impact of these disciplines on the development of muscle strength, coordination, flexibility and spatial orientation is emphasised. Some authors emphasise the importance of aerial acrobatics for the development of correct posture, artistic expression, musicality and emotional expressiveness of children. At the same time, an analysis of the scientific literature shows that the use of aerial silks in the physical development of primary school-aged children has not been sufficiently explored. Most studies focus on the training of professional athletes or circus performers, whilst the methodological aspects of working with children of primary school age remain under-researched.

III. Identifying previously unaddressed aspects of the overall problem.

Despite the growing popularity of aerial silks, there remains insufficient research into the methodology for conducting classes with children of primary school age, the specifics of adjusting the intensity of exercise, the creation of a safe educational environment, and the pedagogical conditions for the effective physical development of children through aerial acrobatics.

IV. The following issues require further research:

the adaptation of aerial acrobatics exercises to the age-specific characteristics of primary school children; the impact of training sessions on children's physical qualities; the use of game-based teaching methods; the combination of acrobatic exercises with choreographic training; psychological support for children whilst preparing for performances and competitions; and the interaction between coaches and parents during the children's training. The insufficient development of these aspects highlights the need for further scientific research in this field.

V. Formulation of the article's objectives (statement of the research question).

The aim of this article is to demonstrate the importance of aerial silks as an effective means of physical development for primary school age children.

To achieve this aim, the following objectives have been set: to analyse the characteristics of aerial silks; to determine the impact of these sessions on the physical development of primary school children; to describe the specific features of organising sessions for children; to highlight the importance of the choreographic and playful components in the learning process; to determine the role of parental support during sessions and in preparation for performances.

VI. Presentation of the main research material.

One of the promising innovative areas in children's physical education is aerial silks. This activity combines elements of acrobatics, choreography, gymnastics, circus arts and theatrical expression. Aerial silks are a form of aerial gymnastics in which exercises are performed on special pieces of fabric suspended from the ceiling. A distinctive feature of this discipline is its comprehensive effect on the child's body, as the sessions actively develop strength, flexibility, coordination, endurance, vestibular stability, posture and artistic expression.

The popularisation of aerial acrobatics is linked to the work of the French circus Cirque du Soleil, which in the 1990s introduced aerial silks as a distinct form of performing art, combining aerial gymnastics with dance and drama. Historically, the origins of aerial acrobatics are linked to 17th-century Chinese gymnastics on straps. Significant contributions to the development of this discipline were made by the Canadian gymnast André Simand and the French acrobat Gérard Fasoli, thanks to whom aerial silks were incorporated into the curricula of circus training institutions in France.

In Ukraine, the active development of aerial acrobatics began around 2017, when the first competitions and festivals dedicated to this art form and sport were held. Today, aerial acrobatics is gaining popularity amongst children of all ages, and classes at specialised studios often start as early as the age of six.

Early primary school age is particularly well-suited to aerial acrobatics, as children of this age exhibit high levels of mobility, natural flexibility, the ability to quickly acquire new motor skills, and a less pronounced sense of fear when performing exercises at height. This is precisely why the issue of using aerial silks as a means of physical development for children of primary school age is relevant from both a scientific and a practical perspective.

Aerial acrobatics on silks is a complex, multi-faceted form of physical activity that combines physical, aesthetic and creative-emotional components. The technique of aerial silks is based on three key elements: climbing to the height, wrapping oneself in the fabric, and falling from a height in the fabric [3, p. 38].

Whilst performing the climb, the child learns to coordinate arm and leg movements, support their own body weight and develop strength in the upper body. There are basic, French and Russian types of climb, which are gradually mastered in accordance with the pupils' level of training.

Wrapping in fabric involves securing certain parts of the body to the fabric and performing various elements: splits, balances, swings and static poses. This process develops coordination, flexibility, concentration and spatial awareness [2, p. 35].

Fallings are more complex technical elements and should only be performed once basic skills have been mastered and provided there is adequate belaying. They help to develop courage, reaction speed and vestibular stability.

Early school age is the most favourable period to start aerial acrobatics. At this age, children possess a high level of natural flexibility, joint mobility and the ability to quickly master new movements. Furthermore, their low body weight makes it considerably easier to perform climbs and basic elements on the silks [1, p.15] (Fig. 1).



Figure 1. Performing a front split on the aerial silk

The play-based approach to learning is particularly important when working with children of primary school age. Children absorb learning material more effectively through emotionally engaging activities. This is why warm-ups can take the form of active games, moving around whilst imitating animals, or carrying out creative tasks.

The structure of an aerial acrobatics session for primary school children should include: a general warm-up; floor exercises; strength training; exercises on the silks; choreographed sequences; and breathing recovery exercises. Performing acrobatic elements on the floor mats plays a key role: somersaults, “cartwheels”, and forward and backward rolls. These exercises develop coordination and spatial awareness, and prepare children for more complex elements performed at height.

Before beginning exercises on the silks, strength training is essential. This may include pull-ups, leg raises, exercises for the abdominal and back muscles, inverted positions and splits. Such exercises help to build core strength and develop the strength required to perform the elements safely [8].

One of the most important stages of training is learning to climb the silks. Children often find it difficult to coordinate this movement, but thanks to regular training and healthy competition amongst pupils, the skill is acquired quite quickly.

At the initial stage, exercises on the rope loop are particularly effective. They are safer and more accessible for children. A variety of exercises can be performed on the rope loop: handstands, twists and splits. Elements such as the ‘butterfly’, ‘ballerina’, ‘four’, ‘foetal position’ and others can also be performed by beginners. Even simple elements help to develop strength, coordination, concentration and confidence in one’s own abilities [6, p. 110] (Fig. 2).



Figure 2. Performing the "butterfly" element on the fabric.

Particular attention must be paid to choreographic training during lessons. Combining acrobatic exercises with dance sequences helps to develop correct posture, graceful movements, musicality, expressiveness and a refined style of performance. If, from the very start of their training, a child learns the importance of performing movements gracefully, this has a positive impact on the quality of their future training.

Aerial acrobatics classes have a significant impact on the physical development of children of primary school age. Regular training helps to: develop strength in the arms, back, abdominal muscles and legs; improve flexibility; develop coordination; promote good posture; build endurance; enhance the functioning of the vestibular system; boost self-confidence; and foster discipline and a strong work ethic.

As well as physical development, aerial acrobatics has a positive impact on children's emotional and psychological well-being. Preparing for performances and taking part in competitions help to develop a sense of responsibility, communication skills, the ability to work as part of a team and to overcome nerves [8].

Parental support plays a key role in children's training. The parents really can help their child adapt to the training process, overcome difficulties and develop a positive attitude towards their sessions. Psychological support for children in the event of setbacks during competitions is crucial, as primary school-aged children are characterised by high emotional sensitivity.

When preparing competition routines, it is essential to take into account the children's age and psychological characteristics. The routine should be short, vibrant, emotional and not overloaded with complex elements. The correct choice of musical accompaniment, costume and image, appropriate to the child's age, is of great importance.

VII. Conclusions from this study and future prospects in this area.

In conclusion, aerial silks is an effective and innovative means of physical development for primary school age children. This type of activity has a comprehensive effect on the child's body, promoting the development of strength, flexibility, coordination, endurance, correct posture and vestibular stability. It has been established that primary school age is a favourable period for beginning aerial acrobatics training, owing to children's high level of mobility, natural flexibility and ability to quickly acquire new motor skills. Prospects for further research include the development of teaching methods for aerial acrobatics for children of different ages, studying the impact of these activities on children's physical and psycho-emotional development, and the creation of physical education programmes incorporating elements of aerial acrobatics in out-of-school educational institutions.

References:

- [1.] Bekh I.D. (1993) Vyvchennia osobystosti molodshoho shkoliara. [The Study of the Personality of Primary School Pupils]. Primary School. No. 3. pp. 15–18. (In Ukrainian)
- [2.] Gur'ieva O.N. (2009) Vytoky vynykennia osnovnykh zhanriv tsyrkovoho mystetstva. [The Origins of the Main Genres of Circus Art.] Mariupol. 125 pp. (In Ukrainian)

- [3.] Nevelika A., Sutula O. (2022) Istoriia vynyknennia povitrianoi akrobatyky, yak vydu sportu. [The history of the emergence of aerial acrobatics as a sport.] Physical Rehabilitation and Recreational and Health Technologies. No. 7(1), pp. 38–40. DOI:10.15391/prrht.2022-7.09 (In Ukrainian)
- [4.] Sosina, V. Yu. (2021) Khoreohrafiia v sporti. [Choreography in Sport]: a study guide. Kyiv: Olympic Literature. 276 pp. (In Ukrainian)
- [5.] Todorova V.G. (2018) Khoreorafichna pidhotovka v tekhniko-estetychnykh vydakh sportu. [Choreographic Training in Technical and Aesthetic Sports]: monograph. Lviv: Lviv State University of Physical Culture. 252 pp. (In Ukrainian)
- [6.] Agans J.P., Davis J.L., Vazou S. & Jarus T. (2019) Self-Determination Through Circus Arts: Exploring Youth Development in a Novel Activity Context. J Youth Dev. No. 14(3), pp. 110–129 DOI:10.5195/jyd.2019.662 (In English)
- [7.] Kozina Z.H., Shepelenko T.V., Sobko I., et al. (2017) Factor structure of the integral readiness of aerobics athletes (women). Journal of Physical Education and Sport. No. 5, pp. 188–196. DOI:10.7752/jpes.2017.s5227 (In English)
- [8.] Steven Santos (2013). Simply Circus. Introduction to Rigging Lyras and Trapeze Bars: Lulu Enterprises Incorporated. 186 pp. (In English)