



The Importance of Using Logorhythmic Tools for Children of Preschool Age with Stuttering Speech Disorders

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Abstract: This article is devoted to the analysis of the process of organizing logarithmic teaching, which is of great importance in the development of speech and language of preschoolers, as well as the shortcomings of children who stutter. Logarithmic training, which is usually carried out with children who stutter, begins very early and is of great importance in the development of children's speech.

Keywords: Stuttering, speech, language, speech therapy, phonemic activity, articulatory, speech therapist, role play, psychologist, special pedagogue, imitation, fine motor skills, articulation, rhythmic music, logarithmic tool.

Introduction: The preschool age is a period when a child actively acquires spoken language, and all aspects of speech—phonemic, lexical, and grammatical—begin to form and develop.

Deficiencies in a child's speech and difficulties in understanding others can hinder their communication with peers and integration into social groups. Since speech is a tool of thinking, as a child grows, their understanding of the surrounding world is shaped and refined through vocabulary. Disruptions in the main functions of speech inevitably have a negative impact on a person's activity, reducing their engagement and potentially causing severe psychological distress. For instance, the incorrect pronunciation of certain words can create uncomfortable situations for an individual, making communication with others difficult and preventing them from fully expressing their thoughts.

One of the more severe types of speech disorders is stuttering. The underdevelopment of speech ability is characterized by abnormalities in speech tempo (rate),

as well as in expressive speaking and reading skills. Stuttering is defined by disruptions in speech rate, tempo, and fluency. In such cases, the communicative function of speech is impaired, meaning it ceases to function as a means of communication.

Stuttering is mainly caused by the inability of the speech apparatus muscles to function smoothly, often due to spasms in muscle fibers. According to foreign and Russian researchers, stuttering is observed in 2% of children worldwide.

Literature Review

At the beginning of the 19th century, several French researchers explained the origin of stuttering by linking it to irregularities in the function of the speech apparatus and its central components. In the 1930s and later in the 1950s–60s, the mechanism of stuttering began to be studied based on I.P. Pavlov's theories on higher nervous activity and, to some extent, the mechanisms of neurosis. In this context, some researchers interpreted stuttering as a symptom of neurosis (Yu.A. Florenskaya, Yu.A. Povorinskiy, among others), while others explored different forms of stuttering (V.A. Gilyarovskiy, M.B. Khvatsev, I.P. Povarnin, N.I. Zhinkin, V.S. Kachergina, and others).

Both foreign and Russian scholars have studied the speech defect of stuttering. Today, systems of speech therapy exercises have been developed to address stuttering in preschool children.

Researchers such as S.A. Mironova, G.A. Volkova, V.I. Seliverstov, and N.A. Chevelyova have worked with preschool children; A.V. Yastrebova, R.E. Levina, N.A. Chevelyova, S.M. Lyubinskaya, and V.I. Seleverstev have focused on school-age children; while I.Yu. Ableeva, L.E. Andryonova, A.Ya. Evgenova, and M.V. Smirnova have developed systems of correctional and complex therapeutic work for adolescents and adults who stutter.

Ye.V. Chayanova and Ye.V. Konorova consider that speech therapy rhythmic helps develop attention (its concentration, capacity, stability, and distribution) and memory (visual, auditory, motor, logical, and complex types).

V.A. Griner and German researchers such as C. Kohler and Chr. Schwabe have demonstrated that speech therapy rhythmic can be used as a psychotherapeutic method (a group psychological approach, music therapy).

DISCUSSION AND RESULTS

Stuttering in children is a disruption of the tempo-rhythmic aspect of speech, caused by repeated spasms in the articulatory, phonatory, or respiratory parts of the speech apparatus. In children, stuttering is

characterized by speech blocks on specific sounds, their repetitive and involuntary reiteration, accompanying physical movements, speech tricks, logophobia (fear of speaking), and autonomic nervous system responses.

Such children often repeat sounds, syllables, or words multiple times, or, conversely, pause and struggle to pronounce them with great effort. These children require a comprehensive pedagogical, medical, psychological, and corrective approach.

In this study, we focused on stuttering as a speech defect and aimed to use logorhythmic methods for its correction.

Logorhythmic sessions combine speech, music, and movement techniques. The purpose of logorhythmic therapy is to eliminate speech development disorders, correct and manage speech pathologies in children using phrases and music, and help children adapt to their environment.

Correcting speech through logorhythmics involves addressing the following problems:

- Development and correction of speech processes;
- Creating motivation for speech activity;
- Stimulating phonemic awareness;
- Activating vocabulary;
- Developing articulatory muscles;
- Supporting overall development;
- Enhancing visual and auditory memory;
- Teaching proper breathing techniques during and outside of phonation.

The implementation of these activities has proven effective in correcting speech disorders such as stuttering.

There are specific reasons for using speech therapy rhythmic in correctional work with children who stutter:

There is a functional connection between speech function and its motor-executive components, as well as the general motor system. Normal human speech is ensured by the coordinated activity of several centrally controlled mechanisms. Damage to specific parts of the cerebral cortex reveals the connection between those areas and particular aspects of speech function. The closer the damage is to the Broca area, the more pronounced the impairment of the motor components of speech becomes.

For speech and other functions to operate normally, it is necessary to maintain coordination in time intervals, speed, movement rhythm, and reaction timing. However, such coordination is not only managed by the

higher cortical parts of the speech functional system but also involves the cerebellum (which regulates the positioning of the larynx, head, neck, and shoulder muscles), the medulla oblongata (which controls the respiratory muscles), and other internal structures. Thus, synchronization of timing, speed, and rhythm of movements is a crucial condition for the coordinated functioning of separate components of the complex functional speech system. A failure to synchronize the activities of these components may become a functional cause of speech disorders.

This perspective is confirmed by a well-known fact: in children who stutter, any changes in speech rhythm (such as during reading aloud or recitation) often result in reduced stuttering. Similarly, repeating a rhythm (e.g., tapping a beat with the hand) while speaking helps reduce or eliminate stuttering. The use of a metronome to provide rhythmic auditory signals is considered an effective tool in correcting stuttering. Just as the central nervous speech mechanisms require rhythm perception, they also benefit from the consistent tempo of neural processes.

Didactic Foundations of Speech Therapy for Children

The system of corrective education and upbringing for children with speech disorders is built upon the general theory of learning (didactics), which studies laws and principles, methods, organizational forms, and tools of instruction. In modern pedagogy, it is customary to highlight the following fundamental didactic principles: individualization and collectivism, systematicity and consistency, conscious activity, clarity, durability, and others. The general nature of these principles and their specific application to children who stutter define all aspects of corrective education—its content, methods, and organizational forms.

The diversity of existing methods in speech therapy today—depending on the form of speech disorder, age of the child, and the conditions of therapeutic work—emphasizes the need to develop a foundational theoretical basis for correction. There is an undeniable enriching interrelation between the general theory of learning and the specific methods of speech therapy. The methods of speech therapy are built using the general rules of didactics, while the theory of learning relies on the results of specific methods as a basis for generalization. Thus, the main didactic patterns and principles serve as a foundation for educational and corrective work with children who have speech disorders. Understanding these foundations helps predetermine the success of pedagogical and corrective efforts for children who stutter.

Individual Approach to Children Who Stutter

Group and collective speech therapy sessions with

children who stutter have proven effective through years of practice. Group sessions create an environment in which all children can actively participate. However, the need for an individual approach does not imply opposing the individual to the group. Only by knowing each child's capabilities can effective group work be organized.

In speech therapy, the individual approach primarily involves in-depth assessment of each child who stutters, both before and during therapy, and selecting corrective-pedagogical tools based on their psychological traits and speech abilities. The selection of didactic materials and working formats is determined by the child's age. For example:

- Preschool-aged children require attention to the "Preschool Education and Upbringing Program" and a focus on play-based learning;
- School-aged children benefit more from structured academic activities;
- Adolescents and adults require consideration of various types of labor-related activities.

The composition of speech therapy groups is also formed based on the age of the children. Different age groups demand specific therapeutic methods and adjustments in the intensity of individual components of therapeutic and pedagogical approaches to effectively overcome stuttering.

For example:

- In preschool children, the main focus is on speech lessons in the form of games, educational activities, and minimal medical interventions.
- In adolescents and adults, on the contrary, greater emphasis is placed on medical interventions and psychotherapy (including suggestive methods), while pedagogical tools play a secondary role.

In speech therapy work with children who stutter, implementing the principle of an individual approach requires thorough initial and dynamic (during the session) assessment of the child, which plays a crucial role. For the speech therapist, linguistic, psychological, and pedagogical observations are of great importance. These observations help determine the necessary forms of correction and enable the therapist to predict the effectiveness of speech therapy.

Building trust through interactive problem-solving. Trust is key for children who stutter, and activities should be adapted to help them build it. These exercises, ranging from solving puzzles to riddles, encourage children to face challenges, improve problem-solving skills, and simultaneously celebrate their perseverance and resilience. They help children view their unique voice as a strength and support their

growth into confident communicators.

Creative self-expression. Creativity is a powerful tool for self-expression, especially for children who stutter. Activities such as drawing and storytelling games that encourage children to share their feelings, explore emotions, and celebrate individuality can be organized. Artistic activities provide a safe way for children to express themselves and feel empowered.

Developing real-world skills through role-play. Role-playing gives children opportunities to practice speaking in real-life scenarios. Whether it's ordering food at a restaurant or giving a presentation in class, these games develop practical communication skills and confidence in everyday situations. Children gain the tools they need to navigate common speech scenarios with ease and confidence.

Strengthening relationships with friends and family. Many activities for children who stutter are well-suited for group games, making them an excellent way to connect with family and friends. Collaborating on simple tasks or creative projects promotes teamwork and strengthens relationships.

Support matters: These shared experiences remind children that they are not alone on their journey with stuttering.

Why are games and activities important for children who stutter?

These games and activities are not just a form of entertainment—they are tools for empowerment and growth. They help children to:

- Develop communication skills in a stress-free, enjoyable environment;
- Build confidence through celebrating achievements, big or small;
- Encourage self-expression through creative tools;
- Strengthen relationships with peers and loved ones who understand their experiences.

CONCLUSION

Based on the study, analysis, and observation of the literature on children who stutter and their challenges, the following conclusions can be drawn:

- The preschool age period is a time of rapid development for children. The intensive changes during this time cover all areas—from psychophysiological and psycholinguistic development to the complex mechanisms of personality formation;
- Stuttering is classified as a severe speech disorder, affecting all aspects of speech;
- As a result of the disorder, children in this

category also experience imbalance issues;

- Psychological and neurological changes are observed in children due to this defect;
- Logorhythmic correctional activities for children with speech disorders should consider their holistic development. These correctional measures should focus on strengthening the nervous system and physical condition of the child, promoting recovery, and eliminating deviations and pathological signs in their psycho-physical state;
- Combining logorhythmic tools with medical interventions enhances the effectiveness of correctional activities;
- General motor preparedness of various muscle groups positively influences the normalization of breathing and articulation muscle activity. Performing rhythmic exercises with positive emotional involvement encourages the development of correct speech and stimulates children's engagement in communication, play, and movement improvisations;
- Logorhythmic tools are used as a supplement to the core correctional work, which increases its overall effectiveness;
- Any novelty in the sessions increases the child's interest, which in turn motivates them to work on themselves.

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