



THE INFLUENCE OF EMOTIONAL-VOLITIONAL STATE ON SPEECH RATE IN SCHOOL-AGE CHILDREN WHO STUTTER AND THE EFFECTIVENESS OF AN INTEGRATIVE SPEECH THERAPY APPROACH

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Abstract: Stuttering is a complex speech disorder characterized by disruptions in the fluency and rhythm of speech, repetitions of sounds and syllables, prolongations, blocks, and irregular speech rate. In school-age children, the manifestations of stuttering are frequently associated not only with speech-motor difficulties but also with emotional and volitional characteristics. Anxiety, fear of speaking, emotional tension, insecurity, reduced self-confidence, heightened sensitivity to evaluation, and avoidance of communicative situations may significantly influence the quality and rate of speech. The purpose of this article is to examine the influence of the emotional-volitional state on speech rate in school-age children who stutter and to substantiate the effectiveness of an integrative speech therapy approach.

Keywords: stuttering, school-age children, emotional-volitional state, speech rate, speech fluency, speech therapy, integrative approach, emotional regulation, anxiety, communicative competence, psychological support, speech correction, special pedagogy.

Speech is one of the most important means of communication, learning, social interaction, and personal development. For school-age children, fluent and understandable speech is particularly important because oral communication is constantly involved in educational activities, interaction with teachers and peers, participation in classroom discussions, answering questions, reading aloud, and expressing personal opinions.

Stuttering is one of the most complex speech disorders affecting the fluency and rhythm of verbal communication. It is manifested through repetitions of sounds, syllables or words, prolongations, speech blocks, involuntary pauses, and



disturbances in speech rhythm. However, the clinical and pedagogical picture of stuttering cannot be fully explained only by its external speech manifestations.

In school-age children, stuttering can become closely associated with emotional and psychological experiences. A child who repeatedly encounters difficulties while speaking may begin to anticipate speech failure, become anxious before speaking, avoid particular sounds or words, refuse to participate in communication, or experience embarrassment when speaking in front of others.

Consequently, the relationship between emotional-volitional state and speech rate deserves particular attention in speech therapy research and practice. Emotional tension can affect respiratory coordination, phonation, articulatory activity, speech initiation, pauses, and overall speech tempo.

The problem becomes especially relevant in the school environment, where children are regularly required to speak publicly and demonstrate their knowledge verbally. Therefore, effective intervention should address not only the speech symptoms of stuttering but also the emotional and volitional factors that maintain or intensify communicative difficulties.

The emotional-volitional sphere includes a person's ability to experience, regulate, and express emotions, control behavior, overcome difficulties, maintain purposeful activity, and adapt to changing social situations. In children who stutter, these processes may be influenced by repeated negative experiences associated with communication.

A child may experience fear before speaking, tension when addressing a teacher, embarrassment when communicating with peers, or frustration after experiencing a speech block. Repeated negative experiences can gradually influence self-perception and communicative behavior.

The emotional reaction to stuttering may become more significant than the speech difficulty itself. For example, a relatively mild disruption in speech may cause considerable anxiety if the child expects ridicule or negative evaluation. Conversely, a child with more pronounced speech disfluency may demonstrate comparatively stable emotional behavior when the social environment is supportive.

This indicates that the severity of stuttering should not be assessed solely by counting speech disruptions. A comprehensive assessment should also consider the child's emotional response to communication, communicative motivation, avoidance behavior, self-confidence, and ability to regulate emotional tension.



Speech rate is an important component of speech fluency. It includes the speed of articulation, the frequency and duration of pauses, the rhythm of speech, and the coordination between respiration, phonation, and articulation.

Emotional tension can significantly alter speech rate. Under conditions of anxiety or excitement, some children begin speaking excessively quickly. The acceleration of speech may lead to insufficient respiratory control, reduced articulation, omission of sounds or syllables, and increased frequency of repetitions.

Other children demonstrate the opposite reaction. They may speak very slowly, experience prolonged pauses, or have difficulty initiating speech because of anticipatory fear and muscular tension.

Thus, emotional factors can produce two seemingly opposite patterns:

excessive acceleration of speech;

excessive slowing and interruption of speech.

Both patterns may reduce communicative effectiveness.

For this reason, the aim of speech therapy should not simply be to establish a mechanically “slow” speech rate. The specialist should help the child develop an individually appropriate, stable, rhythmic, and communicatively effective speech pattern.

One of the important psychological characteristics observed in some children who stutter is anticipatory anxiety. The child may begin to think about possible stuttering before actually speaking.

For example, when asked to answer a question in class, the child may immediately experience emotional tension, think that classmates will notice the stuttering, anticipate difficulty with a particular word, and consequently become more tense. Increased tension may then contribute to additional speech disruption.

This creates a self-reinforcing cycle:

anticipation of difficulty → anxiety → increased tension → speech disruption
→ negative emotional reaction → stronger anticipation of future difficulty.

Breaking this cycle is an important objective of integrative speech therapy.

The specialist should therefore create situations in which the child can experience successful communication. Gradual exposure to increasingly complex communicative tasks can help reduce fear and strengthen confidence.

Volitional regulation is also important in the rehabilitation of children who stutter. The child needs to learn to control breathing, maintain an appropriate speech



rhythm, regulate muscular tension, concentrate attention, and continue communication despite occasional speech disruptions.

However, excessive conscious control of every individual sound or word may increase tension. Therefore, the development of volitional regulation should not mean rigid control of speech. Rather, the child should gradually acquire flexible self-regulation skills.

Such skills may include:

- recognizing signs of emotional tension;
- controlling respiratory rhythm;
- using relaxation techniques;
- maintaining an appropriate speaking pace;
- initiating communication without excessive anticipation;
- tolerating occasional speech difficulties;
- redirecting attention from speech monitoring toward communication;
- using positive self-regulation strategies.

These abilities can contribute to the development of more stable speech behavior.

Traditional speech therapy for stuttering often focuses on breathing, articulation, rhythm, speech rate, and fluency. These components remain important, but contemporary intervention increasingly emphasizes the need for an integrative approach.

An integrative speech therapy approach combines several interconnected directions:

1. **speech-motor correction;**
2. **breathing and phonation training;**
3. **rhythmic organization of speech;**
4. **development of fluent speech skills;**
5. **emotional self-regulation;**
6. **psychological support;**
7. **communicative training;**
8. **family involvement;**
9. **pedagogical support;**
10. **gradual social adaptation.**



The main advantage of the integrative approach is that it recognizes the child as a whole personality rather than treating stuttering as an isolated speech symptom.

Correct breathing is one of the fundamental components of speech fluency. Emotional tension may result in shallow, irregular, or poorly coordinated breathing.

Speech therapy sessions can include exercises designed to develop controlled exhalation, coordinate respiration with phonation, and gradually integrate breathing with speech production.

The exercises should be performed without excessive muscular tension. The child should learn to initiate speech naturally during a controlled exhalation and maintain an appropriate respiratory rhythm.

Voice exercises may also contribute to reducing excessive tension and developing a stable phonatory pattern. Soft voice initiation, sustained vowels, rhythmic syllables, and gradually extended speech units can be used according to the child's individual characteristics.

Rhythm plays a significant role in the regulation of speech rate. Children who stutter may benefit from structured rhythmic exercises that combine movement, speech, clapping, tapping, or other forms of rhythmic support.

Rhythmic activities may help the child coordinate breathing, articulation, and speech initiation. They can also reduce excessive focus on individual speech disruptions.

Gradually, external rhythmic support can be reduced so that the child learns to maintain an appropriate internal speech rhythm.

Gradual Development of Fluent Speech. **Fluent speech should be developed gradually, beginning with relatively simple communication situations and progressing toward more complex ones.**

The progression may include:

isolated sounds and syllables → words → short phrases → sentences → descriptions → dialogue → spontaneous conversation → public speaking.

At each stage, the child should experience successful communication. The specialist should avoid creating excessive pressure for “perfect” speech.

The central principle is that communication should remain meaningful. The child should not perceive speech therapy as a constant test of whether he or she can speak without stuttering. Emotional self-regulation is a key component of an



integrative approach. Children should learn to recognize their own emotional states and identify situations that increase speech tension.

Appropriate techniques may include:

- controlled breathing;
- progressive relaxation;
- muscle relaxation;
- visualization;
- short pauses before speaking;
- positive self-instruction;
- emotional labeling;
- attention-switching techniques;
- gradual exposure to feared communication situations.

For younger school-age children, these techniques can be introduced through games and stories. Older children can use more conscious self-monitoring and cognitive strategies.

Play-based methods are particularly effective in working with school-age children because they reduce psychological pressure and increase motivation.

Role-playing games can simulate everyday communication situations such as:

- asking a teacher a question;
- introducing oneself;
- speaking with a classmate;
- ordering something in a shop;
- answering a telephone call;
- giving a short presentation;
- participating in a group discussion.

Such activities create a safe environment for practicing communication.

Gradually, simulated situations can be transferred into real-life communicative contexts.

An integrative approach may also incorporate selected cognitive-behavioral principles. The objective is not to eliminate every negative thought but to help children develop more realistic and constructive attitudes toward communication.

For example, the child can learn to replace catastrophic expectations such as “I will definitely fail when I speak” with more realistic thoughts such as “I may experience a pause, but I can continue communicating.”



This approach can reduce anticipatory anxiety and help the child focus on the communicative purpose of speech rather than constantly monitoring fluency.

The effectiveness of speech therapy depends considerably on the environment surrounding the child. Parents and teachers should avoid rushing the child, interrupting speech, completing sentences, or demanding immediate repetition.

A supportive communication environment should include:

- sufficient time for the child to speak;
- attentive listening;
- reduced communicative pressure;
- positive reinforcement;
- avoidance of ridicule;
- respect for the child's individuality;
- encouragement of participation.

Teachers have a particularly important role because the classroom can either increase or reduce speech-related anxiety.

A child who stutters should not automatically be excluded from oral participation. Instead, the teacher can gradually adapt the conditions of participation according to the child's needs.

The effectiveness of an integrative speech therapy program should be evaluated through multiple indicators.

Speech-related indicators may include:

- frequency of speech disruptions;
- duration of blocks;
- speech rate;
- rhythm stability;
- respiratory coordination;
- articulation;
- spontaneous speech fluency.

Psychological and communicative indicators may include:

- speech-related anxiety;
- communicative confidence;
- avoidance of speaking situations;
- willingness to participate in classroom activities;
- emotional self-regulation;



ability to initiate communication;
social interaction with peers.

This multidimensional assessment provides a more accurate picture of rehabilitation outcomes than measuring speech disruptions alone.

A systematically implemented integrative program can contribute to several positive changes.

First, the child may develop greater awareness and control of respiratory and speech processes. Second, speech rate may become more stable and appropriate to the communicative situation. Third, emotional tension associated with speaking may decrease.

Furthermore, successful communication experiences can increase self-confidence. As the child becomes less afraid of communication, avoidance behavior may decrease, which in turn creates more opportunities for natural speech practice.

The ultimate objective is therefore not simply fluent speech in a therapy room but improved communication in everyday life.

The development of digital technologies creates additional opportunities for the rehabilitation of children who stutter. Interactive applications can provide structured exercises for breathing, rhythm, speech rate, pronunciation, and communication.

Artificial intelligence and speech analysis technologies may potentially assist specialists in monitoring speech rate, pauses, repetitions, and other acoustic characteristics. Digital systems may also facilitate individualized training programs.

Virtual reality environments can provide controlled communication situations in which children practice speaking before gradually transferring these skills to real-life settings.

However, technological tools should complement rather than replace direct interaction with a speech therapist, psychologist, teacher, and family.

Stuttering in school-age children is a complex phenomenon involving speech, emotional, psychological, behavioral, and social dimensions. The emotional-volitional state can have a significant influence on speech rate, fluency, respiratory coordination, speech initiation, and communicative behavior.

Emotional tension may lead to accelerated speech, excessive slowing, prolonged pauses, blocks, or increased avoidance of communication. At the same



time, repeated speech difficulties can negatively influence the child's emotional state, creating a reciprocal relationship between speech and psychological factors.

Therefore, effective intervention should not focus exclusively on the mechanical correction of speech. An integrative speech therapy approach should combine breathing and voice training, rhythmic organization of speech, gradual fluency development, emotional self-regulation, communicative exercises, psychological support, play-based methods, and cooperation with parents and teachers.

The effectiveness of such an approach is determined by its systematic, individualized, and interdisciplinary nature. The child should be supported not only in producing more fluent speech but also in developing confidence, emotional stability, communicative competence, and the ability to participate actively in social and educational life.

In this context, the future of speech therapy for children who stutter should be associated with the integration of traditional corrective methods and modern psychological, pedagogical, digital, and technological approaches. The central objective should remain the development of a confident communicator who can use speech effectively in real-life situations, even when occasional speech disfluencies occur.

Thus, the correction of stuttering should be viewed as a comprehensive developmental process aimed at improving not only speech fluency and speech rate but also the child's emotional well-being, volitional regulation, communicative motivation, social adaptation, and overall educational participation.

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