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AmurCon 2021: International Scientific Conference**SPEECH THERAPY WORK TO ELIMINATE STUTTERING IN
PRESCHOOL CHILDREN**

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Abstract

The relevance of the research is due to the role of speech in the formation of higher mental functions in children, and the fullness of speech activity, which is considered a necessary condition for the harmonious development of the child's psyche. Statistics show that stuttering is the most common, complex, and long-lasting speech disorder in children. According to the level of speech development, children with stuttering are a heterogeneous group: their stuttering can be accompanied by the insufficient formation of lexical and grammatical language skills. These make it difficult for children to form communicative competencies, which generally aggravate speech symptoms and cause paroxysms of stuttering. We used modified and adapted techniques for the diagnostic study, which allowed determining the language skills formation, communication skills, and the proficiency level of correct, stuttering-free speech. The research revealed that the speech activity of preschoolers with stuttering has characteristic signs of speech underdevelopment together with convulsive symptoms. It manifests itself in an insufficient level of development of lexical and grammatical skills and a low level of coherent speech. These require the organization and implementation of purposeful speech therapy work. This activity includes overcoming disorders of speech flow smoothness, communication skills development in various communication situations and enriching the content of the utterance, the development of lexico-grammatical structures, and coherent speech.

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1. Introduction

The first and most important condition for a child's psyche formation and further correct development is the timely and complete mastery of speech. Severe speech disorders can affect a child's mental development, including higher levels of cognitive activity. The limitation of speech communication affects the formation of the child's personality, causes mental layers and specific features of the emotional-volitional sphere, and leads to the development of undesirable character qualities: shyness, indecision, isolation, and negativism. All these affect school adaptation, academic performance, and the choice of profession in the future.

Communication, according to the views of Russian scientists, is one of the main conditions for a child's development, the most significant component in the formation of his personality, and, finally, the leading type of human activity aimed at cognition and self-assessment through other people.

Leontiev (2019) understood communication as a process of a specific type – communication activity. As a component of communicative activity, we considered communication skills formed consistently in children with naturally developing speech, based on their adaptation to communication needs. However, such skills are not developed spontaneously in the right amount in children with speech disorders.

Stuttering is a widespread and long-lasting speech disorder in children. It is characterized by the symptom complex and, in some cases, low remedial effectiveness. Stuttering occurs during the most active speech formation period (aged 2-6), limiting the children's communication skills.

As Akimenko (2017) and Voroshilova (2017) note in their research, stuttering is a disorder in the communication system, which leads to changes in the personality of the stutterer and difficulties of social adaptation.

The study of stuttering was conducted from different perspectives, including neurological and cognitive information processing (De Nil & Bosshardt, 2001).

Paroxysms of stuttering in children often occur in speech material usage of complex lexical and grammatical terms in emotionally significant communication situations. The underdevelopment of language means not only hinders the formation of communication skills. But it also exacerbates speech symptoms as a whole (Sikorsky & Shevtsova, 2019).

Levina (2009), Seliverstov (2020) and other researchers indicate the presence of phonetic-phonemic and lexical-grammatical disorders in children with stuttering and deviations in the formation of phrasal speech. All that further complicates the symptom complex of this speech disorder.

In connection with the humanization of education, the modification of school curricula and teaching methods, as well as in the light of the latest concepts of preschool education, the formation of children's skills of positive interaction with others is of great importance, since it is the key to their successful development. These are possible only under the condition of complete mastery of speech.

It is necessary to pay attention to the requirements for competent teachers' training in the organization of the educational process (French & Chopra, 2006). Specific requirements are imposed on teachers who work with children with various developmental disabilities, including stuttering. These don't

imply only professional but also include personal readiness to work with this category of children (Karynbaeva et al., 2017; Winch, 2004).

The needs of society in the importance and necessity of full-fledged communication put forward the problem of eliminating stuttering in preschool children as an urgent category.

2. Problem Statement

The analysis of scientific literature and practical experience of speech therapy work with stuttering preschoolers revealed inconsistencies between the increasing need of society for the importance of full-fledged speech development and the insufficient focus of corrective measures with stuttering preschoolers to eliminate their disorders caused by incomplete development of language skills. The practical relevance of scientifically based remedial technologies in the pedagogical process that contribute to the elimination of stuttering in preschool children with speech underdevelopment reflects the systematization of methods, tools, forms, and techniques of pedagogical work and their insufficient theoretical elaboration.

These inconsistencies determined the research problem, which consists in studying the formation of language skills in preschoolers with stuttering and determining the interdependent relationship between the language skills level and communication skills, together with the theoretical justification of the content of speech therapy work to eliminate stuttering in preschool children.

3. Research Questions

The communication skills that a child should possess to be a complete person include competencies and primary and communication skills necessary to choose and implement activities suitable in the communication situation.

Communication skills and abilities are developed and improved in speech activity, but they are not formed spontaneously in children with speech disorders to the required extent.

Such a speech disorder as stuttering under study is characterized by a predominant violation of the communicative function of speech. As noted by Cagran and Schmidt (2011), Emelyanova et al. (2019), the elimination of stuttering in preschool-age is essential to prevent possible difficulties of school adaptation and studying at school, and also violations of written speech.

In most cases, stuttering is observed with complicated forms of oral communication. Levina (2009) pointed out that fact, and we confirmed it in our observations. Depending on the content of the utterance, stuttering may increase or decrease and sometimes not manifest at all. The highest number of stuttering children make in those statements, the content of which involves mental operations and personal assessment of their behaviour (Levina, 2009). At the same time, it is necessary to note the provoking effect of the semantic, grammatical, emotional complexity of the intended oral message.

Seliverstov (2020) defined the inability of the child to correctly express his thoughts through words at once as the cause of speech stutters. These may be due to insufficient understanding of what the child wants to tell (loses the logical sequence of presentation, speech confusion appears), or limited vocabulary (finds it hard to choose the right word, expression).

Seliverstov (2020) pointed out the connection of paroxysms of stuttering with the complexity of the grammatical and syntactic structure of the phrase, the emotional saturation of the text, the relevance of the dictionary, and the like. Many authors associate the predominance of hesitations at the beginning of words and phrases with a disorder of the process of choosing words and syntactic constructions (Akimenko, 2017; Levina, 2009).

Speech symptoms in stuttering preschoolers are very diverse. Some of them are characterized by a lack of lexical and grammatical features of communication. These complicate the formation of speech communication skills in children and reduce the productivity of speech therapy classes. Thus, it is assumed that there is a causal relationship between the levels of formation of language means and communication skills. Likely, the remedial education process of correcting stuttering in preschoolers with violation of all sides of speech formation requires purposeful study and development of language means.

In our study, the effectiveness of the remedial process of eliminating stuttering can be increased if a new approach to stuttering correcting in preschoolers with speech underdevelopment is introduced. The definition of the content of the technique will be facilitated by a detailed study and determination of the levels of development of language means and communication skills.

4. Purpose of the Study

The experimental study was conducted based on speech therapy groups of Municipal preschool educational institution "Kindergarten of compensating type No. 21" in Birobidzhan. The purpose of the study was to analyze the speech capabilities and communication skills of preschool children with stuttering. The novelty of this work is represented by a significant amount of factual data that significantly complement the scientific understanding of speech symptoms in preschool children with stuttering.

5. Research Methods

The experimental study involved 60 senior preschoolers of Municipal preschool educational institution "Kindergarten of compensating type No. 21" in Birobidzhan. All children have been diagnosed with stuttering.

The subject of the study was the features of speech symptoms and communication skills of preschool children with stuttering.

To conduct an experimental study, we used modified and adapted techniques that allowed us to determine the levels of formation of language means, communication skills, and the level of proficiency in fluent, stuttering-free speech.

6. Findings

We assessed each of the components of speech formation under study (grammatical structure, lexis, and coherent speech) based on the results of the experimental tests performed by children. The success of each speech component was determined by the total number of points scored by children,

which were later converted into a percentage equivalent and correlated with three levels of formation: low level - 0 - 49%; average level - 50% - 79%; high level - 80% - 100%.

A quantitative analysis of the results of studying the level of language proficiency by preschoolers with stuttering is presented in Table 1.

Table 1. Distribution of preschoolers with stuttering by language proficiency levels

Testees	Task completion levels					
	high level		average level		low level	
	number	%	number	%	number	%
60	6	10	30	50	24	40

It turned out that preschoolers with stuttering have an average formation level of grammatical structure, vocabulary, and word-formation skills. The presence of a high level of development of these components indicated only relative well-being: the lower threshold of the percentage content of this level (80% – 85%) and the presence of typical speech errors identified during the examination allowed us to judge the indistinct underdevelopment of speech in this part of children.

The study of proficiency communication skills level of children who stutter revealed the following most characteristic shortcomings. During performing diagnostic tasks to study the degree of children's mastery of speech etiquette, children's replies were characterized by poverty and monotony of the so-called speech formulas. Children did not know enough and used the speech etiquette formulas, and most confidently used them only in situations in everyday life (greeting, request, and apology). Children rarely used extended replicas. More frequently, they were short and collapsed, including only the speech formula. In addition, the children found it difficult to replace the given speech etiquette cliches with similar ones. We should note that the children didn't include addressing in the structure of sentences, along with syntactic and grammatical errors, the number of which increased when trying to use complex constructions.

When studying the ability to request information independently, we revealed that children needed the adults' help since it was difficult for them to formulate a question on their own. The questions asked by children were more often not logically related to each other, which made it difficult for them to achieve the purpose of questioning. The children frequently tried to guess the answer instead of asking. To do this, they defined the pictures lying on the desk without trying to put questions. For individual children, the questioning was quite formal since the replies of the experimenter were not the type of information initiating a further inquiry.

The replica analysis showed low speech activity, manifested in a limited number (1-2) of speech reactions to the stimuli of the experimenter, in a small number of uttered replicas (from 1 to 3), and the absence of stimuli replicas. We could identify a sufficiently high speech activity in 27% of children. The children used the replica-stimuli and addressed the tester initiatively during the conversation.

When composing the dialogue, all the children needed the experimenter's help. The majority of children (53%) were characterized by short, one-word sentences, partial replicas replacement with gestures, lack of initiative, and independence. Separate replicas replaced dialogues.

Assisted by the tester, the rest of the children were able to compose dialogues, which were brief in structure but at the same time included 1-2 dialogical units. The replicas were usually messages in simple, often one-word sentences. In other words, the disadvantages identified in previous experimental tasks (ignorance of speech etiquette, inability to request information, the monotony of replicas, and the like) were seen in the dialogues composed by children.

The general picture of the formation of communication skills in children with stuttering at the ascertaining stage of the experiment is presented in Table 2.

Table 2. Distribution of preschoolers with stuttering by levels of formation of communication skills

Testees	Task completion levels					
	high level		average level		low level	
	number	%	number	%	number	%
60	6	10	30	50	24	40

After calculating the rank correlation, we confirmed the statistical significance of the correlation between the values of language development and the formation of communication skills.

Thus, the low speech activity of stuttering preschoolers, the lack of initiative and independence in communication, the small volume and monotony of independently composed replicas, the inability to combine them into dialogical unities indicated the insufficient communication skills development in this category of children. At the same time, poor language means formation, and manifestations of communication disorders complicating stuttering affect the quality of communication skills that hinder their development.

We studied how to determine the possibilities of children with stuttering to use correct, stuttering-free speech, the dependence of the appearance of paroxysms of stuttering on the degree of speech independence, the degree of speech readiness, the environment, and the structural complexity of speech material. In addition, we traced the manifestation of paroxysms' frequency of stuttering in general. The analysis of the results of this study is presented in Table 3.

Table 3. Distribution of preschoolers by levels of proficiency in speech free from stuttering

Testees	Task completion levels					
	high level		average level		low level	
	number	%	number	%	number	%
60	0	0	37	45	33	55

The study showed the presence of noticeable convulsive symptoms in all children. The quality of children's speech and the convulsive stutters' occurrence frequency was influenced by their speech independence, readiness for speech utterance, the environment (communication situation), and the structural complexity of speech material.

The results of the experiment allowed us to formulate the following conclusions:

- children with stuttering have disorders of the lexical and grammatical skills, reflected in the level of coherent speech development;
- insufficient formation of language means complicates stuttering and affects the quality of communication skills;

- the most unformed among preschoolers with stuttering are the skills associated with requesting information (the ability to ask questions), with composing and conducting a dialogue;

- the insufficient level of formation of language means and the communication skills development, on the one hand, decrease speech activity of preschool children with stuttering, and, on the other hand, reduce the quality of children's speech (its smoothness), since they provoke the appearance of paroxysms of stuttering

Thus, we can state that the oral speech of preschoolers who are stuttering has characteristic signs of speech underdevelopment together with convulsive symptoms. These require the organization of speech therapy work aimed not only at overcoming disorders of the smoothness of the speech flow and developing communication skills in preschoolers in various situations of speech communication but also at enriching the content of the utterance and the development of the lexical and grammatical structures of speech. Only in this case will the stuttering elimination in preschool children be effective. An increase in speech activity in children with stuttering and their speech communication skills development will serve as the key to the successful adaptation of the stuttering at school and their further socialization.

7. Conclusion

Stuttering is considered one of the most common speech disorders. It is characterized by the symptom complex and a predominant disorder of the communicative function of speech. As revealed in the study, insufficient knowledge of language means and communication skills either complicates the possibility of full-fledged children's communication or aggravates speech symptoms and causes paroxysms of stuttering.

The research results showed that in case of insufficient proficiency of language means of children with stuttering, it is necessary to change the approach to the organization and content of speech therapy work. As such an approach, we consider using the thematic principle of the information organization in working with stuttering children.

Specialists should carry out stuttering therapy during studying lexical topics. Each has a selected speech material, and specific remedial goals and implementation methods are defined. We should implement enriching and activating the dictionary, the skills of inflexion-formation and word formation in speech therapy classes, and realize all regime moments in the form of entertaining games (Filicheva et al., 2017; Kozyreva & Borisova, 2018). We should carry out this work against the background of a protective speech regime with the parallel use of tasks for the correct speech breathing development, phonation exhalation, rational voice delivery, smooth vocalization, the development of the prosodic side of speech, and the like in stuttering preschoolers (Shashkina, 2020; Voroshilova, 2017). Children should either develop speech means or capabilities to use them in the communication process. It seems essential that stuttering preschoolers must acquire communication skills and abilities.

For the effectiveness of speech therapy work to eliminate stuttering in preschoolers, it is necessary to coordinate the efforts of all participants in the remedial education process. Speech therapy work should be based on systematic and differentiated approaches, principles of accessibility, systematicity and consistency, accounting for leading activities, and the like.

Such an approach to the elimination of stuttering in preschool children will contribute to a more effective overcoming of their shortcomings and oral speech disorders, which will significantly enhance communication and develop full-fledged communication.

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