Methods of Eliminating Speech Disorders in Dysarthric Children

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Abstract – The article reveals the information on the formation of verbal perception in children with dysarthria, the development of articular apparatus, the detection of vocal articulation, defining sounds in syllables and words, defining the sequence of sounds in words and their number, development of auditory perception and sound-synthesis skills, improvement of the lexico-grammatical aspect of speech, individual training, the interrelation of the tasks, the content of the work and the stages.

Keywords – Dysarthria, Pronunciation Disorders, Lexical and Grammatical Structure, Vocalization and Automation of Sounds, Static and Dynamic Exercises, Auditory Attention, Fine Motor Skills, Glossary.

The content, methods, and conditions of the speech therapy in children with dysarthria speech disorders include the following. The dysarthria speech disorder is reflected in the underdevelopment of phonetic and phonemic speech and disorders in the pronunciation and perception of sounds that results in the incorrect formation of pronouncing the native sound system.

Dysarthria speech disorder is observed in the following conditions of children:
- Differing the sounds that are pronounced incorrectly and difficulties in analysis,
- The other correctly pronounced sounds are analyzed in syllables and words.

While performing this task, the child is tested for the ability to determine the nature of sound analysis and the development of phonemic perception (hearing) and the level of vision.

For instance, the child is given a number of words where he must determine the words where the sound [s] is given. For this task the words should be chosen so that one word must have the sound [s] in it, another shouldn’t have that sound, and the other should start with the sound that is close to the sound [s].

For example: sea, pear, sheep, and others.

Then the child is asked to do the second task. He should determine where in the word the sound [s] is used.

For example: sea, please, pasta.

It assists to forming such abilities as analyzing sounds and the phonematic perception.

The pictures of objects for activities are chosen according to the following criteria:
- The object with the definite sound in name (sand, pasta, a box, a squirrel…);
- The object with the sound that is close to the definite sound (a shop, a shark, a ship…);
- The object with no definite sound (an apple, a ball, a doll, a cat).

The next activity requires from the child to compose words with the definite sound. The words said by the child are noted in the table with the following parts:

1. Correctly composed word (sea).
2. Mixed with a close sound (ship).
3. Mix with another sound (apple).

For the proper and timely development of children’s speech individual approach is very essential. The correct formation of speech depends on the speech of surrounding people and the appropriate treatment of the speech therapist.

The success is guaranteed when the individual speech therapy starts as early as possible in children with phonetic and phonemic underdeveloped speech.

The training is conducted in groups, frontally and individually.

The objectives of the correctional speech therapeutic works in group, frontal and individual trainings are correcting incorrect pronunciation in speech, forming correct pronunciation skills, teaching children to attentive listening their speech, developing phonemic perception and forming analyses and synthesis skills of sounds.

The system of elimination of defects in pronunciation includes:

1. Forming of oral speech perception.
2. Developing of articulatory apparatus motor.
3. Training the correct articulation of the gliding, noisy, sonorous, back of the tongue and deep back of the tongue sounds.

The disorders in the phonetrical perception of the speech are eliminated individually:

1. Determining the articulation of the sound, and determining of the sound in syllables and words.
2. Determining the place of the given sound in words (at the beginning, middle and end of the word).
3. Determining the sequence and number of the sounds in the words.
4. Developing correct sound pronunciation habit.
5. Developing vocabulary and grammar of the speech.

The individual activities and each stage have got their own objectives, content that are interrelated.

The first stage is preparation. This stage has the following tasks:

- Determining of the articulatory apparatus state and developing its action;
- Developing attentive listening;
- Determining correct pronounced sounds in the speech;
- Using the sounds in speech;
- Determining the sounds in syllables and words.

Developing the action of speech apparatus and training correct articulation consist of:

- Developing static and dynamic activities;
- Increasing the action of articulation apparatus, power and accurate movement;
- Eliminating tension in the speech apparatus muscles.

The main objective of the first stage is using the sounds in the speech. It is trained individually.

The sound production in the speech is reflected in the methods of imitation, mechanic and explanation. The sound analysis work is done according to the principle from simple words to more complex ones. Working at sounds analysis requires individual approach to every child.

The objectives of the second individual training stage are:

- Going on to use the sounds in speech;
- Working at developing correct pronunciation habit;
- Developing attentive listening;
- Working at sound analysis;
- Determining the place of the given sound in words (at the beginning, middle and end of the word).
- Determining the sequence and number of the sounds in the words;
- Developing vocabulary minimum and grammar of the speech.

Developing phonemic perception is the main direction of correctional speech therapy. Its implementation is connected
with work at sound analysis. This process includes the following:

- Recognizing And Determining The Out Of Speech Sounds;
- Determining The Sounds Among A Number Of Sounds;
- Determining The Sound In Syllables;
- Composing A Word To The Sound;
- Repeating The Syllables That Differ In One Sound (Basing On Similar And Different Sounds);
- Choosing The Picture To The Sound;
- Determining Voiced And Unvoiced Sounds [S-Z, Σ-Dʒ].

The main objectives of the third individual training stage are:

- Fixing all sounds in the speech;
- Developing the training on sound analysis;
- Improving vocabulary and grammar of the speech.

The characteristics of sound pronunciation deficiency are reflected in:

- Replacing the sounds with articulatory simple and less complex sounds. For example, [s] and [ʃ] are often replaced by [f];
- Unstable using of the sound in different forms of the speech;
- Wrong interpreting of one or several sound.

This kind of children suffer from underdeveloped phonemic hearing that prevents to forming sound analysis skills in children.

It is required to conduct special individual trainings with phonetic and phonemic underdeveloped speech children in special educational establishments, as the correctional trainings guarantees both elimination of their disorders and their wide preparation to primary school. The challenge is to correct children’s speech disorders, to correct their sounds pronunciation and their ability to use them correctly and at the same time to develop their phonemic cognition. Because it is impossible to pronounce the phonemes without properly comprehending and clearly distinguishing them.

Phonemic cognition is developed from the earliest stages of individual speech therapy and is performed in the form of a game in group and individually. It starts with speechless material at first and slowly covers all the sounds in the speech.

From the first trainings, the focus should be on developing phonemic cognition as well as attentive listening and auditory memory. This allows the most effective and accelerated results in the development of phonemic cognition. This is important because the inability to hear the others speech is one of the reasons why it is difficult to pronounce the sounds correctly.

In speech therapy, the child should be able to control his or her own pronunciation and be able to correct speech disorders by comparing his speech with those around him.

The significant phonetic and phonemic disorders of children's speech require long-term and continuous correction. This disorder cannot be completed without special training. The study of speech disorders applies consistent approach to learning speech development. These studies provide details on how children learn and acquire the pronunciation, vocabulary, grammatical structure, fluency of speech, and how children learn the meaning and language of their native language during speech correction.

The goal of dysarthria speech therapy is to improve the ability of children to speak correctly and fluently at a moderate level, to adjust the level of speech and vocabulary, and speech development in their native language.

When we started the speech correction process, we meant that the language factors, their mental activities, and the learning of children were inextricably linked with the development of attention, memory, and self-control skills.

The speech therapist, on the other hand, takes a personal approach by creating a good environment for the child, taking into account his or her mental activity. It is important to pay attention not only to the child’s development of speech, but also to the character and interests of the child. Speech develops in combination with sensory and general motor skills. Fine handicapping focuses on painting, rope tying, making mosaic shapes and more. As children’s action, speech development also lags behind. As a result of hand-held exercises, speech is formed. The following types of training are available:

- Fluent speech formation;
- Activities aimed at forming pronunciation.

The speech therapist uses frontal exercises, small group and individual exercises to correct speech disorders of children. The main purpose of this exercise is speech development and elimination of general behavior, and
speech disorders. Individual training of the speech therapists as the main form of education for elimination of speech disorders. In severe cases of articulatory disorders, the use of vocal cords requires special assistance. In this case the speech therapist with the help of viewing and tactile vibration assists the child to understand and perform the necessary action for the pronunciation of a particular sound. For example, in an article to pronounce the sound of [u] the speech therapist keeps the child’s hand closer to his lips. The therapist should bring the sound closer to the correct pronunciation level, even if it is not clear. At first, it is difficult to achieve a normal pronunciation. At this point, it is very important that the child learns and identifies similar sounds.

The degree of approximation of sounds to the normal pronunciation is determined by the degree of damage to the articulation apparatus. When working on each new sound, it is necessary to study its articulation properties, that is, the main characteristic of articulation, in contrast to other sounds, to compare articulation with others.

Regular exercise brings the sound closer to the required articulation and switches to full vocal pronunciation. The speech therapist gradually requires a clear and varied pronunciation of the studied sound.

The pronunciation exercises are focused on developing articulatory apparatus parts. The used activities are selected based on the speech conditions of individual development of children. Activities also include breathing exercises. The main part of the trainings is devoted to the pronunciation and reinforcement of the studied sound separately and in the syllables. The speech therapist should always check how the child mastered the passages, where the child is asked to describe or illustrate the condition of the articulatory parts characteristic of a particular sound, and then is asked to pronounce the sound separately and in words. Sound exercises are monitored under the visual and tactile perception.

During this period, more exercises are conducted on articulation markers on the differentiation of contrast sounds.

1. Differentiation of oral and nasal sounds [p-m];
2. Differentiation of sounds that belong to nasal sounds [m] and [n];
3. Differentiation of sounds that belong to explosive sounds [k] and [h];
4. Differentiation of vowel sounds [a], [u], [ɔ];
5. Differentiation of the explosive and affricate sounds [t-s].

These activities processes serve as a good basis for mastering other sounds. Then working on sounds that are articulatory difficult to pronounce starts. They are voiced noisy consonants, affricative and sound [r]. Successful work in this period plays a key role in the development of phonemic listening and sound analysis skills. Children can better distinguish sounds at this time. There is a significant increase in children's speech activity and sound analysis skills. Successful work in this period characterized by the developed phonemic listening and sound analysis skills. By this time children can better distinguish sounds. There is a significant increase in children’s speech activity and sound analysis skills.

Children have difficulty in pronouncing sounds [r], [ʃ] and [ʤ]. However, there is a little difficulty in differentiating them. Even during this period, special time is required to work on sound differentiation. Then it is time to work on the differentiation of [s-z], [ʃ-ʤ]. After the speech therapist makes sure that children are able to distinguish sounds correctly then they go through the exercises to determine their place in words. Successful work on developing sound pronunciation, phonemic listening, and sound analysis skills is the basis for children with dysarthria.

REFERENCES