

Correction techniques for language disorders

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Abstract

Logopedics is a special pedagogical subject that deals with the prevention and correction of speech defects. Logopedics as a science was formed out of practical and theoretical reasons, extending its area from the language and communication research in relation to the evolution of personality to that of the formulation of laws and methods of language correction, the presentation of verbal difficulties and verbal behaviour stimulation. Speech disorders are determined by a range of causes that act isolated or associated, this is why the causes must be thoroughly known, as to establish the diagnosis and find the best therapeutic intervention methods. There is an increasing number of children with speech disorders in kindergarten environment. An experiment was conducted to observe the difficulties the teachers face. A group of 20 children (8 girls and 12 boys) was used for a period of 4 months on whom questionnaires to correct language disorders were applied.

Keywords: Logopedics, speech-language pathology, speech disorder, autism, stutter.

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1. Introduction

Speech-language pathology or logopedics is the study of the diagnosis and treatment of language, articulation and voice disorders. This term has been used in North America since the 1970s (formerly as 'speech pathology'). Its domains are variously organised in the institutions and professional schools of different cultures and countries (Bussmann, 1996). The speech-language pathologist must remove the fear of speaking and the fear of making mistakes that persons with language disorders usually have. Moreover, he must guide the person with language disorders towards a correct usage of language (Laura, 2008). The purpose of speech-language pathology is structured in three parts: prevention, therapy and social integration (Gutu, 1975) On the one hand, logopedics is a theoretical psychopedagogical discipline borne from the necessity of unravelling complex problems of language, necessity that has an important role in the physical life and in the structuring of the personality of each person. On the other hand, it is a discipline with a pronounced practical character that targets the education of troubled language, the optimisation of communication and restoration of human relations.

Logopedics provides this science with useful information concerning the prevention, forming and correction of troubled language and enriches the formation methodology of language and the development of a harmonious personality (Laura, 2008).

1.1. Language disorders

Language disorders mean: delay in the apparition and development of language, difficulty in pronouncing sounds, replacement of some sounds with others, writing difficulties and stutter (Vrasmas & Stanica, 1997).

Language disorders can have different malformations as causes at the level of the phono-articulatory system (tongue, teeth, lips, vocal cords and airwaves), lack of stimulation and correction from parents or adults who supervise and take part in children's upbringing. Moreover, language disorders can be generated by some aspects of physical nature, emotional shocks and affective blockages. Those are frequent in children, but they can be also seen in adults after ischemic accidents or strokes (Moldovan & Ciolac, 2007).

Among articulation disorders, the following can be noted:

- Dyslalia is characterised through syllable reduction, mispronunciation or syllable reduction of individual sounds or of many sounds, which leads to unintelligibility (Bussmann, 1996). Dyslalia can be functional, it appears in the period of phonemic development at 1–6 years, and mechanical generated by organic malformations (Musu, Vrasmas & Stanica, 1997).
- Rhinolalia is caused by morpho-functional malformations of the palate and nasal cavity and leads to the distorted pronunciation of sounds. It affects the pronunciation of consonants and vowels, the communicative function of language being severely affected and speaking can become unintelligible (Musu et al., 1997).
- Dysarthria denotes any number of speech-motor disorders in the central or peripheral nervous system in which articulation, phonation or prosody are affected. In dysarthria, recurrent errors or substitutions are typical (Bussmann, 1996). It includes pronunciation disorders determined by deficiencies of phono-articulatory system organs. It is characterised by pronunciation and phonation disorders. This disorder is determined by injuries at the level of and peripheral segments (Musu et al., 1997). The following disorders can be noticed in people with dysarthria: affective (irritability, intellectual instability, negativism and indolence) and somatic (respiratory disorders) (Popescu-Neveanu, 1978)

Among rhythm and fluency disorders, the following can be noted:

- Dysfluency, also known as stutter or stammer, denotes a situation-specific speech production disorder in which the fluency of speech is disrupted by a lack of motor coordination in the muscles involved in articulation, phonation or respiration (Bussmann, 1996).
- Autism is a severe disorder in social behaviour, abnormal development of communicative abilities, pronounced rituals and stereotypic behaviour and abnormal reactions to sensory stimuli. This disorder is believed to have various causes and start in the early childhood, before the thirtieth month of life (Bussmann, 1996).

Among voice disorders, the following can be noted:

- Dysphonia refers to a number of voice disorders caused by deficient phonatory techniques, growths or infections in the larynx, or psychological factors, for instance, stress or depression (Bussmann, 1996). The pronunciation can be nasal or hoarse and is due to the defects of construction or wear of the phonemic apparatus (Popescu-Neveanu, 1978).
- Aphonia refers to an impairment of phonation due to organic causes, such as infection or trauma, or psychogenic causes (Bussmann, 1996). It is the severest voice disorder and it is defined as the incapacity of phonation, the total or partial loss of voice because of the paralysis of vocal cords muscles (Popescu-Neveanu, 1978).

Among writing–reading disorders, the following can be noted:

- Dysphonia covers a number of reading disorders which have different causes (Bussmann, 1996). Dyslexia represents the difficulty to read, manifested through the irregularity of the letters and their anarchic writing on the page (Popescu-Neveanu, 1978).
- Dysgraphia refers to the disorders that intervene in the graphic act. The child’s writing has its own becoming and evolution. Teaching the child is a complex, long and difficult process. Among writing related disorders, we have agraphia that is the relatively total incapacity of learning the graphic act, implying severe disorders at the level of central structures (Verza, 1983).

Among poliform language disorders, the following can be noted:

- Alalia is defined as the most profound language elaboration, organisation and development disorder seen in children who have never talked although they do not have hearing impairment of mental retard (Musu et al., 1997). It is characterised through the incapacity of learning and using language as an instrument of communication, although in some cases sounds or simple words can be emitted (Verza & Schiopu, 1997).
- Aphasia refers to a number of acquired language disorders due to cerebral lesions (which can be caused by vascular problems, a tumour, an accident, etc.). The comprehension and production in the oral and written modalities may be affected to certain degrees, therefore leading to the differentiation of various aphasic syndromes (Bussmann, 1996).
- Mutism refers to the effects of psychoneurotic disturbance that can lead to muteness in children and adults (total mutism), or to the refusal of children to speak to particular people in particular situations (elective mutism). In adults, traumatic or post-traumatic mutism may be a consequence of a trauma or lesion on the brain stem (Bussmann, 1996).

1.2. Therapies and detection

Language disorders therapy is a stage in the methodologic frame and a sum of programmes related to the main language disorders. The attributions of the speech-language pathologist are the following:

- The speech-language pathologist establishes the diagnosis and supervises cognitive therapy, ludotherapy, psychometric therapy activities; he organises and forms social and personal autonomy. An important aspect in the progress of the therapy is time. The duration of the recovery process depends on a multitude of factors: the level of intellectual development, age, parents’

active involvement in the logopedics process and the child's level of involvement in the therapy. Therefore, therapy can last from a few months to a few years (Vrasmas & Stanica, 1997).

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1.3. Causes of the apparition of language disorders

For an effective treatment, it is necessary to identify the causes and the moment when the language handicap appeared. Most of the times, there is not only one cause. There are situations when there are a multitude of causes that lie at the base of the emergence of some disorders or of the lacking development (Verza, 2003).

There are a variety of causes for language disorders, starting from some anatomical-physiological anomalies of the central nervous system to the imitation of some pronunciation models used in inappropriate teaching methods (Vagotski, 1934).

Central organic causes can be of two types: central or peripheral, and after a period of action of the causative agent, they can become congenital or gained (Partenie, 1999).

Peripheral organic causes can lead to many anomalies. The injuries of the musculature of peripheral organ nerves can cause partial or total paralysis of the muscles that participate in phonation and articulation, leading to a disorder of coordination of the muscles involved in speaking. Other peripheral organic causes can be infections, radiations, alimentary and vitamin deficits, syphilis. All these lead to malformations such as cleft lip and palate, maxillofacial anomalies, macro or microglossia, malformations of the mouth, nose and pharynx (Partenie, 1999).

Functional causes of speech disorders are strongly related to those of organic origin (central and peripheral). The lack of exercise of injured peripheral organs leads to a functional insufficiency at a cortical level and injuries at this level lead to functional insufficiencies at the motricity of peripheral organs (Lascus, 1997).

The psycho-social causes of language disorders must be sought in the language characteristics of those people who come in contact with the children and the way children assimilate those. Sometimes these causes can be in correlation with the organic and functional ones, whereas sometimes they can be isolated (Lascus, 1997).

2. Findings

More and more children have language disorders in the school environment. These represent a real challenge, considering that teachers are not qualified to trace and ameliorate these problems.

The main deviations that can appear in children with language development disorders are the ones related to semantics, such as poor vocabulary, difficulties in using passive vocabulary, lack of understanding of basic concepts related to everyday life, they cannot define notions, classify categories, do not know and recognise colours, do not recognise the use of things, understand metalinguistic aspects (synonyms, antonyms), understand words with a high level of generalisation (size, shape, colour, quantity), notice the absurd in images and situations.

Tracing language disorders is not accessible only to a qualified person such as a speech-language pathologist, but they can be also identified by parents and children who signal certain difficulties in the child's verbal expression and who notice that his way of communication is different from that of

the majority of children. Generally, children with language difficulties express themselves and learn how to write and read with more difficulty.

Discovering a problem means identifying it generically, without measuring it and knowing the possibility of eliminating it. Discovering the problem implies the recognition of obstacles in verbal and written communication and it symbolises only the initial moment of an intervention.

2.1. Metadata

- Observation

Observation or observational research is the type of research in which the researcher observes in progress behaviour (White & McBurney, 2010). In this paper, the observation was planned and recorded systematically. A group of 20 children (8 girls and 12 boys) was observed for 4 months (Kothari, 2004).

- Statistical analysis

The hypothesis of this study refers to the distribution of pupils who suffer from language disorders. The outcome of this statistical analysis shows that pupils who worked with a speech-language pathologist showed signs of improvement. The most severe form of language disorder was dyslalia.

At the beginning of the study, 35% of the total number of children suffered from dyslalia, and following the exercises done during the 4 months, they reached 10%. According to Figure 3, it can be noticed that certain language disorders were reduced to 0%, such as mutism, aphasia, alalia and aphonia, dysphasia (Elliott & Woodward, 2007).

For this method, we had a group of 20 children (8 girls and 12 boys) who completed logopedics sheets related to family, objects in the house, nouns, adjectives, categories of animals (wild and domestic), fruit, vegetables and means of transport.

The welfare report made on children from the experimental group showed that a greater number of children with speech disorders come from good and very good families (Figure 1). This cause can be because of parents' lack of time.

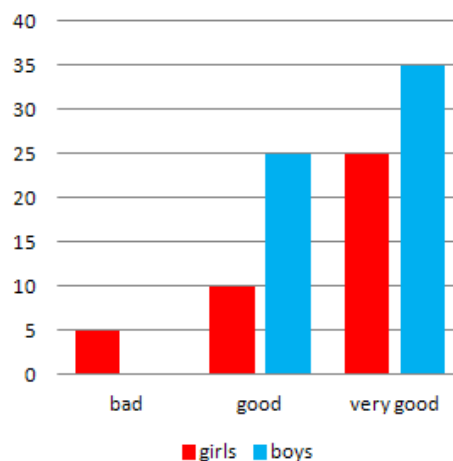


Figure 1. Children's distribution according to the background in %

Following the tests, it was shown that generally, the subjects have pronunciation, rhythm and fluency disorders. The number of children with these disorders is greater compared to the number of children that have voice or language development disorders. Figure 2 illustrates the distribution of children according to language disorders.

It is recommendable that the logopedics programme (breathing, diction and articulation exercises) should take place every morning for a few minutes. This general training applies to all children, irrespective of the fact they have or lack speaking difficulties. The general training has the purpose that the phono-articulatory organs fortification and development of the prosodic aspect of language through the training of phonemic hearing.

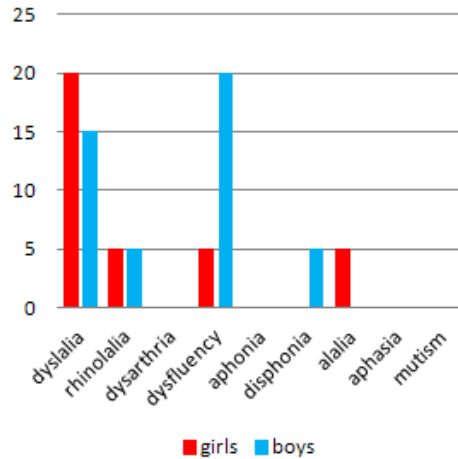


Figure 2. Children's distribution according to language disorders in %

Among articulatory gymnastics exercises recommended by Hvatter and Seeman, we note: articulation games, facial gymnastics exercises, lingual and labial gymnastics exercises, velopalatine gymnastics exercises.

After 5 weeks of nonverbal articulation movement exercises, the logopedics programme becomes more complicated, because some exercises on isolated sounds emission are added. These exercises are in the form of onomatopoeia illustrations. They are done with the entire group of children in an alert rhythm to avoid monotony.

Following the experiment that took place for 4 months, it can be noticed that the introduction of language disorder correction methods leads to the improvement of children's language quality.

Figure 3 shows the distribution of children at the end of the experiment according to language disorders and it demonstrates that generally, less severe language disorders that do not have organic causes can be improved significantly with a lot of work and commitment from teachers.

Comparing the data from the beginning of the experiment with the one from the end, remarkable progress in children with language disorders can be observed.

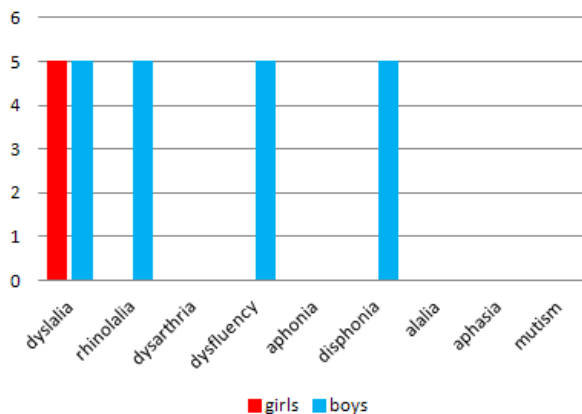


Figure 3. Children’s distribution according to language at the end of the experiment in %

3. Conclusions

After conducting the experiment, we noticed the difficulty the teachers face. The children’s language tests showed that the number of boys who suffer from different language disorders is greater than the number of girls; in what concerns the categories that language disorders are part of, most of them belong to rhythm and fluency category and pronunciation disorders category. The presence of a speech-language pathologist in kindergarten and primary school environment represents a great help in the integration of children with language disorders in society. These problems can be easily treated at an early age, and once time passes, the difficulty in solving those increases, and in some cases, it can no longer be solved. This can lead eventually to their dropping out of school.

Acknowledgements

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