



DISLEXIA E PROBLEMAS DE APRENDIZAGEM

Resumo

Este artigo apresenta o conceito de diversos autores sobre dislexia, os tipos de dislexia e suas classificações, as dificuldades de aprendizagem de alunos disléxicos, os sintomas e tratamentos da dislexia, bem como estratégias de como tratá-los e seus direitos no âmbito do direito, para apresentar uma breve discussão sobre o assunto em questão, visto que muitos ainda não sabem como identificar e tratar uma pessoa com esse transtorno.

Palavras-chave: Dislexia. Aprendizagem. Sintomas. Tratamento.

DISLEXIA Y PROBLEMAS DE APRENDIZAJE

Resumen

Este artículo presenta el concepto de varios autores sobre la dislexia, los tipos de dislexia y sus clasificaciones, las dificultades de aprendizaje de los estudiantes disléxicos, los síntomas y tratamientos de la dislexia, así como estrategias sobre cómo tratar a estos estudiantes y sus derechos ante la ley, para presentar una breve discusión sobre el tema en cuestión, ya que muchos aún no saben cómo identificar y tratar a una persona con este trastorno.

Palabras-clave: Dislexia. Aprendizaje. Síntomas. Tratamiento.

DYSLEXIA AND LEARNING PROBLEMS

Abstract

This article presents the concept of several authors about dyslexia, types of dyslexia and their classifications, the learning difficulties of dyslexic students, the symptoms, and treatments of dyslexia, as well as strategies on how to deal with these students and their rights before the law, to present a brief discussion on the subject in question, as many still do not know how to identify and treat a person with this disorder.

Keywords: Dyslexia. Learning. Symptoms. Treatment.

INTRODUCTION

Lately it is expected that all children learn how to read and write at the correct stage of their schooling, if this does not happen it will compromise their entire learning process. However, for many students, this process has many difficulties, a path full of obstacles, as they are not able to correspond equally to other colleagues on what is expected of them. This is the case of dyslexic children, who when not diagnosed, can be negatively affected in their global development and later in their adult life.

This article presents the concept of dyslexia in the view of several authors, the types of dyslexia that exist, the symptoms and treatment and the learning difficulties of dyslexic students in the school period, also considering the protection of their right to education in some legislations.



Many dyslexic children due to the lack of specific training of their teacher and the school itself to identify the disorder and intervene with them end up not having the appropriate treatment, failing to be monitored in an appropriate way.

Dyslexia affects the process of learning to read, write and decode language or symbols. Many students during the schooling process, when not detected with dyslexia, can become undisciplined students, without motivation, even considered “lazy”, with low self-esteem, they can reach depression, with the retention of this student or even school dropout.

It is very important that children are diagnosed and treated according to the intensity degree of the disorder, so that they are monitored and can feel included within the school context.

DYSLEXIA - SOME CONCEPTS

The terminology Dyslexia originates from the contraction of the Greek words: dys = difficult - impaired, and lexis = word, that is; impaired word (FERREIRA *et al.* (2014), *apud* GUIMARÃES, 1986, p. 83).

According Tenório; Pinheiro (2018),

dyslexia are a genetic disorder that makes learning, reading and writing difficult. The brain, for reasons not yet well understood, has difficulty in linking the letters and forming the words, and does not correctly relate the sounds to the syllables formed. As a symptom, the person starts to change the order of certain letters when reading and writing (p. 48).

The male sex is more affected by the dysfunction in the proportion of three boys for each girl and there are varying degrees of intensity. Dyslexia is usually detected when the child begins to learn to read and write, but some milder cases can be noticed as early as adolescence or adulthood.

Luczynski says that the definition of dyslexia has been improving as scientific research evolves and that the National Institute of Child Health Human Development (NICHD) and the Board of Directors of the International Dyslexia Association (IDA) have adopted since 2002 that “dyslexia is a specific learning disorder of constitutional origin. It is characterized by difficulties in the accurate and / or fluent recognition of isolated words, reflecting difficulty in processing and manipulating the sound structure of words (phonological processing). These difficulties in decoding isolated words are often unexpected in relation to age and other cognitive and academic skills and are not the result of a general developmental disorder or sensory problems”.

Dyslexia denotes a difficulty in learning to read, despite a good socioeconomic environment or adequate intelligence and teaching. Studies have revealed that dyslexic children may also have particularly deficient skills in relation to phonological processing outside of reading (CATRACA LIVRE, 2020, p. 89).

According to Pinheiro, 2017, “dyslexia is one of the disorders in the neurodevelopment. It is characterized by a disorder of the written language that affects up to 10% of the population, regardless of culture, social class, or gender. Symptoms like dyslexia - difficulties with reading, spelling, and writing - occur in approximately 85% of learning difficulties; however, care must be taken not to classify them as identical.”

There are two main types of dyslexia:



1. developmental dyslexia, which is an innate condition.
2. acquired dyslexia, which is when a person loses the ability to read and write because of a brain injury caused by trauma or a disease, such as a stroke. This condition is also called alexia (PINHEIRO, 2017).

Pinheiro, 2017 states that according to experts and consultants from Dyslexia International, developmental dyslexia (usually referred to only as dyslexia) is a disorder in the neurodevelopment that affects written language, being a lifelong and often hereditary condition. This results in persistent problems related to:

- reading.
- spelling (written with errors of addition, omission or substitutions of vowel or consonant);
- writing.

It is commonly associated with difficulties in:

- concentration.
- short term memory.
- organization.
- sequencing (alphabet, days of the week, months etc.).

Dyslexia is not caused by:

- low intellectual abilities.
- deficient schooling.
- fragile family structure.
- refusal to learn.

Dyslexia is also not caused by problems with vision, hearing, or motor coordination. However, in some cases, these problems can coexist with dyslexia.”

In addition to the problem with language, dyslexics may have difficulties in the exact sciences.

TYPES OF DYSLEXIA

“Even though Dyslexia has increased in recent years, much has to be done to alleviate the anguish of dyslexics, given that this disorder does not manifest itself equally for everyone, it varies from person to person, in different degrees as we have seen previously. Seeking help to define the variety of Dyslexia types, Ferreira; et.al, made the following comparative table:

Dysphonic Dyslexia: Based on the IAR (2004) classification, this type of Dyslexia is related to auditory aspects. Ianhes (2002), also relates this type of Dyslexia as one in which the individual has difficulties in auditory perception in the analysis and synthesis of phonemes, temporal difficulties, and in the perceptions of succession and duration. Iar (2004) teaches us that the individual with this disorder has difficulties in establishing differentiation in the analysis, synthesis, and discrimination of sounds. Both Iar and Ianhes are unanimous in stating that the exchange of phonemes and graphemes, changes in the order of letters and syllables, as well as greater difficulty in writing than in reading are constant characteristics of this type of Dyslexia.

Deseidetic Dyslexia: It is marked by the individual's visual difficulty. For Iar (2004), those affected by this type have spatial difficulties related to the perception of directions, spatial location, and distance relations. For Ianhes (2002), the main mark of this type of Dyslexia is the difficulty presented by the individual in the analysis and synthesis of phonemes, syllabic reading, without achieving the synthesis of words, agglutinations and



fragmentation of words and exchanges for phonetic equivalents. For both authors, those affected by Deseidetic Dyslexia have greater difficulty in reading than in writing.

Visual dyslexia: Classification defended by Ianhes (2002). This type of dyslexia would be marked by a deficiency in visual perception, in visomotor coordination (does not visualize the phoneme cognitively).

Auditory Dyslexia: Also raised by Ianhes (2002). It would be the deficiency in auditory perception, in auditory memory (does not cognitively make the phoneme audible).

Mixed Dyslexia: Defended by Ianhes and Iar, this type of Dyslexia is characterized by the combination of more than one type of Dyslexia. However, for the Brazilian Dyslexia Foundation (2009), this division is even more comprehensive. According to this Institution, individuals with difficulty in writing, understanding mathematics, who have difficulty concentrating, are hyperactive or hypoactive may also have dyslexic syndrome. It is worth noting:

Dysgraphia: it would be the lack of skill or delay in the development of written language. For the dyslexic with this type of Dyslexia, writing with a typewriter or on the computer is easier when compared to handwriting, because in this mode the letters may be misspelled, blurred or incomplete, with a tendency to print in block letters. Spelling errors, inversions of letters, syllables, and numbers and the lack or exchange of letters and numbers are often characterized.

Dyscalculia - It would be the individual who presented difficulties with Mathematical Language. This difficulty presents itself in different ways at its different levels and complex in its origin. They can already appear in basic arithmetic learning, as well as, later, in the elaboration of more advanced mathematical thinking. There are also difficulties arising from the imprecise perception of time and space, as in the apprehension and processing of mathematical facts, in their proper order.

Attention Deficiency - It is the difficulty of concentrating and keeping attention focused on a central objective, to discriminate, understand and assimilate the central focus of a stimulus. This state of concentration is fundamental so that, through discernment and the elaboration of teaching, the learning fixation can be completed. Attention Deficiency can manifest itself in isolation or associated with a Body Language that characterizes Hyperactivity or, conversely, Hypo activity.

Hyperactivity - In this case, the involvement refers to excessive psychomotor activity, with differential patterns of symptoms: the hyperactive young person or child with 13 impulsive behavior is one who talks incessantly and never waits for anything; he cannot wait for his turn, interrupting and trampling everything and everyone. Because she acts without thinking and without measuring consequences, she is always involved in small accidents, with abrasions, bruises, cuts. A second type of hyperactivity has the most pronounced characteristic, symptoms of difficulties in focusing attention. It is a nervous over-stimulation that leads this young person or child to move from one stimulus to another, failing to focus attention on a single topic. Thus, it gives the false impression that it is disconnected, but, on the contrary, it is because it is connected to everything, at the same time, that it cannot concentrate on a single stimulus, ignoring others.

Hypo activity - Hypo activity is characterized by a low level of psychomotor activity, with slow reaction to any stimulus. It is that child called "good", who always seems to be in the "world of the moon", "daydreaming". Commonly, hypoactive has poor memory and vague behavior, little social interaction and hardly gets involved with his colleagues.”



DYSLEXIC LEARNING DIFFICULTY

The relationship between written language and spoken language is a problem for the dyslexic student that occurs in different degrees from being mild to severe.

In addition, the ability to relate written to spoken language depends on the type of spelling to which the dyslexic is exposed (transparent or opaque, eg: Portuguese, English, respectively), or the system (alphabetical or logographic, eg.: Portuguese, Mandarin, respectively). The manifestation of dyslexia is greater in the spellings where the relationship between grapheme and phoneme (reading) and between phoneme and grapheme (writing) is very irregular, the so-called opaque spellings (eg, English and French), in comparison with the regular, also called transparent spellings (eg Spanish and Italian) (PINHEIRO, 2017).

Thus, dyslexia syndrome can be thought of as a spectrum with different degrees of impaired reading, depending on the specificity of each child and cultural factors. The problems happen according to the degree of intensity of the disorder and the symptoms are diverse and differ according to that degree. They are most visible in the literacy period. The main indication is in the interconnection of the written word with the sound of speech, and the child can develop mirrored writing (writing words backwards). Learning with reading is slower and they cannot read clearly aloud, nor can they interpret what they have read.

According to Macedo (2020), the main symptoms of dyslexia are:

- Lack of organization and attention;
- Low self-esteem;
- Intense dispersion;
- Difficulty reading, writing, spelling and studying;
- Motor coordination delay;
- Difficulty in interpreting and understanding texts;
- Delayed speech or impaired speech;
- Cannot associate letters and sounds;
- Difficulty copying from books or chalkboards;
- Location problems, left and right;
- Identify phonemes, associate with letters and recognize rhymes and alliterations;
- Difficulty in memorizing the times table, recognizing mathematical symbols and concepts (dyscalculia);
- Spelling rules: addition, error, inversion, omission or exchange of letters and syllables (dysgraphia);
- Difficulty in handling maps, consulting dictionaries, doing research and memorizing information.

According to Pinheiro (2020); *apud* José Morais (1994), professor at the Free University of Brussels, Belgium, people with dyslexia do not process written words correctly and quickly enough.

However, there is a positive side. Whatever the severity of reading and writing difficulties, children with dyslexia often have a differentiated learning ability that can include:

- a great notion of space, demonstrated, for example, in the construction of models without the use of instructions;
- the ability to think deeply about issues and ask pertinent and sensible questions using advanced vocabulary;
- well-developed social awareness;
- ability to solve problems quickly;



- high performance in geometry, chess, card and computer games, as well as superior technological skills (PINHEIRO, 2020).

When the child begins to be literate, parents and teachers should be alert to possible learning disorders that interfere with school performance and child development. Dyslexia, dyscalculia and dysorthography are some of them. These disorders, when not well monitored, can cause marginalization or even stigmatization of the child, as well as causing failures that will cause difficulties in socializing (CATRACA LIVRE, 2020).

Regarding the signs of dyslexia, Almeida, 2009 states: “It is important for parents and teachers to be aware of signs of dyslexia, these signs can be detected as a child. Parents and teachers should be attentive when all learning subsidies are exhausted, the child, even if stimulated in various ways, has a deficit of content, this starts more frequently in the first school years, during the literacy period, tending to become more accentuated over the years.”

It is essential that the teacher knows what dyslexia is and how to work with students, as many have a distorted notion about the disorder and consider that the student has no concentration, has no desire to learn, and sometimes it is lazy, making him feel incapable, unmotivated, showing signs of indiscipline, aggression, and may even become depressed due to low self-esteem, making his case more serious, leading him to repetition and even dropping out of school.

It is important to remember that these students are supported by the law, where they are considered as “Special Educational Needs” (SEN). CNE / CEB RESOLUTION N°. 2, OF SEPTEMBER 11, 2001 says in its article 5:

Art. 5°. Students with special educational needs are those who, during the educational process, have:

I - marked learning difficulties or limitations in the development process that make it difficult to monitor curricular activities, comprised of two groups:

- a) those not linked to a specific organic cause;
- b) those related to conditions, dysfunctions, limitations or deficiencies;

II - communication and signaling difficulties differentiated from other students, demanding the use of applicable languages and codes;

III - high skills / giftedness, great ease of learning that leads them to quickly master concepts, procedures, and attitudes.

The Statute of the Child and Adolescent (ECA), law n°8069, of July 13, 1990, art.53, items I, II and III supports the student, “children and adolescents have the right to education, aiming at the full development of their person, preparation for the exercise of citizenship and qualification jobs, assuring them:

I – equal conditions for access and permanence at school;

II – right to be respected by their educators;

III – the right to contest evaluative criteria and may appeal to higher education institutions.”

The teacher should treat the student naturally, always use clear and objective language, speak looking directly at him, bring the student close to the educator, discreetly check if he is understanding so as not to put him in evidence, observe if he is taking notes on the slate before erasing it. Parents and teachers must work together so that the student values what he does, thus increasing his motivation and restoring his self-confidence. Not forgetting that this student will be slower than the others and the educator needs to be patient. Regarding evaluations, the dyslexic needs more time to perform the tests, which are advised to be oral. Within the classroom, the educator needs the use of differentiated



strategies, such as the use of stimulating resources, so that he can see, feel, hear, and handle games, posters, CDs etc. (ALMEIDA, 2009).

Luczynski reiterates that “it is necessary that Brazilian schools are transformed into welcoming places, that really educate and make students feel understood and respected in their differences - or neuropsychological diversities. What begins to happen across the world, because the universe of Education is experiencing a historic and unprecedented moment, with scientific evidence demonstrating that Dyslexia is neither a disease nor a disability; that dyslexia is a way of being and learning.

TREATMENT

“Early identification is important, because the child's brain, around 6 years of age, is much more plastic and potentially more malleable for redirecting neural circuits” (LUCZYNSKI *apud* SHAYWITZ, 2003, p. 63).

Dyslexia can be treated through learning strategies stimulating reading, writing and vision, being essential the support of the whole team, formed by pedagogue, psychologist, speech therapist and neurologist. Even if dyslexia have no cure, good results are achieved if the appropriate treatment is used, as it is adapted to the particularities of each one, and there may be progress in the ability to read and write.

According to TUA SAÚDE; 2018, Treatment for dyslexia involves a multidisciplinary team, which can act on the needs of the affected child or adult. Treatment options include:

1. Speech Therapy

The speech therapist is a very important professional for the treatment of dyslexia, being the one who establishes strategies to facilitate reading and reduces the difficulty in associating the corresponding speech sounds with writing. The treatment is adapted so that there is an evolution from the most basic to the most difficult contents and the training must be constant, to maintain and reinforce what has been learned.

2. Adaptations in school learning

It is up to the teacher and the school to play a very important role in alleviating the learning disorder and include the child including in the classroom, working with ways to help independence and autonomy, through strategies such as giving oral and written instructions, clearly explaining activities which will be carried out, in addition to encouraging group activities and outside the classroom, for example.

In this way, the child will feel less excluded and will be able to find strategies more easily for his challenges.

3. Psychotherapy

Psychological treatment in dyslexia is very important, as it is common for the dyslexic to have low self-esteem and have difficulty in interpersonal relationships due to their learning disability.

Psychotherapy sessions can be recommended once a week for an indefinite period and can help the individual to relate in a healthy and satisfactory way.

4. Treatment with medicines

Treatment with drugs in dyslexia is only indicated when there are other conditions involved, such as attention disorder and hyperactivity, in which Methylphenidate can be used or when there are behavioral changes, with the possibility of using antidepressants or antipsychotics, for example, as there is no specific medication that can cure dyslexia, not



even an exclusive therapy that is indicated for all dyslexics. In these cases, patients with dyslexia must be accompanied by a psychiatrist or neurologist, who may recommend the use of medication, if necessary.”

The participation of parents is very important when the child receives the diagnosis, as the child does not know how to solve his educational problem alone, it is necessary that the treatment starts as soon as possible, because the longer it takes for the intervention of parents, teachers, and professionals in the field, the greater their disappointments. One cannot lose hope, the problem exists and must be faced positively, accompanying the child and providing treatment with the appropriate professional.

According to Ferreira *et al.*, 2014 “Parents teaching their dyslexic child how to organize their time in the best way, while also encouraging them to do things for himself, will also be of great value” (p. 52).

Ferreira *et al.* 2009, *apud* National Dyslexia Association (2014), adds that the parents of the dyslexic child should be aware of the child's behavior regarding possible disappointments and frustrations that may occur along the academic scale of this student.

Excessive signs of stress may demonstrate that the child has been offended in his integrity or in his ordinary activities related to schoolwork, and attentive parents can help their children overcome most obstacles, only by showing that they are on their side. With continuous efforts in the classroom, both with homework and with the jokes of classmates, this dyslexic child may have to rest for more time than other children, so that attentive parent will know how to accept the child's school absence when they show obvious signs of fatigue.

Dyslexic children should not be treated differently from others, they should be treated like the others, even if they need extra attention, they cannot perceive this treatment, nor should they be compared to other children.

Parents can stimulate the child with drawings, paintings, musical instruments, and sports since dyslexics have creativity as an ally. Still, they can count on some software and even their own video games to train reading and writing, as well as audiobooks to stimulate the connection between sound and letters.

According to Gauto, Godinho (2015), some guidelines for parents regarding the treatment of children with learning disorders:

- First, do not treat him as sick, as he is not. He only has some cognitive difficulties.
- Encourage the child always, praising, valuing small hits, giving affection, security and raising his self-esteem, showing limits with love;
- Encourage to be organized, with routines;
- Praises are very good, especially in reading and writing; - Help him with his homework, but don't do it for him;
- Setting limits is very important, as bad behavior at school is not part of the disorder.

The child needs confident, motivated, his self-esteem must be stimulated so that he faces the challenges he will encounter in his walk.

CONCLUSION

Dyslexia is a disorder that affects a reasonable number of people, it has degrees of intensity that varies from the lightest to the most severe, if detected early in the literacy phase it becomes easier to work with the dyslexic students, thus avoiding them to feel frustrated, unsuccessful, and unmotivated. The teacher can be a great ally in this sense, but to do that, specific training is necessary so they can be able to identify the student with the disorder, as



this student is often mistakenly taken as an uninterested student. The family also has an important role in accepting that the child undergoes evaluations and accepting the diagnosis providing the appropriate treatment for the child.

Dyslexics have creativity as an ally, which can be worked through several resources that help them in their process of learning to read, write and connect the sound of the word to the letters.

Therefore, although dyslexia have no cure but when diagnosed it can be treated with an appropriate intervention, providing dyslexics with inclusion in the classroom and motivation to participate in school activities.

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