

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

نظرة عامة حول صعوبات القراءة: أسباب وتأثيرات صعوبات القراءة، وكيفية التعامل معها؟

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Abstract:

This article aims to highlight the causes and effects of dyslexia and how to deal with it at home and school. There are many definitions of dyslexia, and there are many causes and effects of dyslexia. Some researchers have said that dyslexia is a genetic problem, and some of them have said that dyslexia is an environment problem. In fact, most of the scientists and researchers say dyslexia is a genetic and environmental problem. In addition, there are many effects of dyslexia not only at school but also at home and in the community. Reading, spelling, writing, and doing math effects which may happen most of the time in school, and there are some effects that may happen in home and the community such as contacting with people, contributing in activities with others, and missing understanding with others during conversation.

Keywords: Learning disabilities, Reading disabilities, Dyslexia.

تهدف هذه الورقة البحثية إلى إيضاح أسباب صعوبات القراءة (الديسليكسيا) والتأثيرات التي تسببها صعوبات القراءة (الديسليكسيا) في المدرسة والمجتمع، وكيفية التعامل معها في المدرسة والبيت. هناك العديد من التعاريف لصعوبات القراءة (الديسليكسيا)، حيث يمكن القول أن عسر القراءة عبارة عن مشكلة في تعلم مهارة القراءة، ويعود سبب هذه المشكلة إلى الخلل في العمليات الإدراكية منذ الولادة. تعتبر صعوبات القراءة (الديسليكسيا) أحد أنواع الاضطرابات اللغوية الخاصة، ويتصف بوجود صعوبات في حل الرموز وتهجئة الكلمات. يرى الكثير من العلماء والباحثين أن أسباب صعوبات القراءة (الديسليكسيا) وراثية وبيئية معاً. لا يقتصر تأثير صعوبات القراءة (الديسليكسيا) على الطالب في المدرسة بل يتعدى إلى البيئة الطبيعية. تؤثر صعوبات القراءة (الديسليكسيا) على بقية المهارات الأكاديمية مثل القراءة والكتابة، والإملاء، وكذلك الرياضيات، كما أنها تؤثر على الطالب في المجتمع والبيت حيث تؤثر على عمليات التواصل مع الآخرين، والمشاركة في الأنشطة المجتمعية ومع الآخرين.

الكلمات المفتاحية: صعوبات التعلم؛ صعوبات القراءة؛ الديسليكسيا.

Introduction

Dyslexia is a common disability from many years ago, and it affects many skills such as reading, spelling, and writing. However, dyslexia is an old term, and scientists have found this term when they have found a young boy who had a problem with reading and writing. Moreover, scientists have found that some children with dyslexia are intelligent and they do not have physical problems. According to *Dyslexia: An Overview* there are many famous people with dyslexia such as “This list includes director Steven Spielberg, investor Charles Schwab and actress Whoopi Goldberg. It also

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

includes quarterback Tim Tebow, and author DavPilkey, who created the popular Captain Underpants books” (2015, p.1). There are many definitions of dyslexia, and there are many causes and effects of dyslexia. Some researchers have said that dyslexia is a genetic problem, and some of them have said that dyslexia is an environment problem. In fact, most of the scientists and researchers say dyslexia is a genetic and environmental problem. In addition, there are many effects of dyslexia not only at school but also at home and in the community. Reading, spelling, writing, and doing math effects which may happen most of the time in school, and there are some effects that may happen in home and the community such as contacting with people, contributing in activities with others, and missing understanding with others during conversation. Nevertheless, researchers and scientists have found many methods can use with people who have dyslexia such as putting people with dyslexia in groups, giving them social tasks, and giving them extra time during exams. However, researchers have defended dyslexia, and how it is common, and they into the causes and effects emphasize both sides genetic and the environment, and how can we deal with dyslexia.

What does dyslexia mean?

According to Emily, L. if you want to understand what dyslexia is you should know what dyslexia is not. Dyslexia is not evidence of stupidity or a sign of unwillingness to be active, and it is not a physically an eye problem or an ear problem. Dyslexia is a common case which affects different skills that are related to brain operations, such as speaking and writing. Sometimes, teachers, educators, many doctors and specialists may

call reading disability or reading disorder instead of dyslexia but in fact reading disability may affect other skills, such as speaking, writing and spelling (2014). According to Payne, T., & Turner, E. children who have problems with writing, reading, spelling or manipulating of number, which are lower than their level of performance. Children with dyslexia may gain some skills in some subjects quickly which appear in a high level of ability speaking, but they may face sustained difficulty to gain reading, math, and writing. However, children with dyslexia may have other problems such as they may become extremely frustrated, and they may have emotional and/or behavioral disabilities. Dyslexia is not only educational problem but also a social problem which means this problem may spread in a home and in the workplace even in a community (1999).

According to Peer, L. there are many different definitions of dyslexia, that may be convenient for a certain goal. Moreover, the BDA Management Board agree with this definition:

“Dyslexia is a specific learning difficulty that mainly affects the development of literacy and language related skills. It is likely to be present at birth and to be life-long in its effects. it is characterized by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual's other cognitive abilities” (2006. p. 1).

How common is dyslexia?

According to Emily, L. we do not have the exact number of dyslexia because there is no way to find that. However, we know that dyslexia is the very common disability among disabilities. There are many students with reading disabilities, and there are more than 2 million students ages 3-21

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

have learning difficulties which means most of them have dyslexia because dyslexia is the most common disability of learning disabilities (2014). According <http://dyslexiahelp.umich.edu/answers/faq> dyslexia is the most common and main cause of writing, reading and spelling disabilities. Reading disability is likely that between 5-10% of people, and this number is near to 17%(2015). According to Kyla, B. there are 80 percent of students with learning difficulties have reading disorder and most of them are boys because dyslexia affects more boys than girls (2008).

Causes of dyslexia

According to Emily, L. researchers have not found what is the main or the specific reason or cause of reading disability. However, scientists have known that there are genes and brain differences which may influence child's brain, and that mean there are chances to have a reading disorder. There are some causes that may be causes of dyslexia because scientists have found these reasons that may be contributed to reading disability.

Genetic

According to Lapkin, E. scientists have found that there are many genes which are responsible for dyslexia and language problems. However, if a child has reading disabilities that means there is a chance his or her parents or relative may have dyslexia too. About 40 percent of the relative of a child with a reading disorder may have the same problems. Also, there is about 49 percent of parents of children with reading disability might have dyslexia too because children may inherit this problem from their parents which means dyslexia spreads in families(2014).

According to Duane, D. D., M.D. there is 45 percent of the first degree of relatives may be affected by reading disability, and most of them are males (1979). According to Science and technology: Reading minds researchers have found that a gene on chromosome one which is responsible for some causes of dyslexia. They have found a gene on chromosome two which is inducing mutations in it so this is responsible as well of reading disorder (2001). According to

Reid, G., & Fawcett, A the brains with dyslexia are different and look different in type and function between readers, and dyslexia is inherited in some cases. Moreover, there are some studies that indicate that dyslexia is inheritable because there are some behavioral genetics appear in children with a reading disorder which means kids inherit these genes from their parents. Scientists have found a case which is most likely inherited dyslexia through many genes which increase one's susceptibility to reading disability(2004). According to Bailet, L. research has mentioned that dyslexia happens because of the different ways of process information in the brain. Scientists have taken pictures of the brain, and they have found that there are different between people when they read. Nevertheless, people with reading disabilities use a different part of their brain than people without reading disability, and the pictures show that the brains of people with reading disability do not work effectively during reading. So that tells the scientists why reading seems hard work, and why people with dyslexia read slowly. The main problem with people who have dyslexia is reverse numbers and letters and see words in a wrong way which means they see words backward. Children with reading disability have a problem which is they do not recognize phonemes which are namely; the key sound of speech. Children with dyslexia struggle to connect sounds with letters symbols for

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

the sound and blending sounds into words. It is hard for people with dyslexia to recognize familiar and short words or to sound out longer words(2012).

Environment

According to Atherton, H., &Crickmore, D. there are some environmental reasons of reading disabilities such as body health, medical cases, and lifestyle people should take care of that before the conception because some pregnant women are not ready to care of their babies, and some of them may miss the opportunity to prepare for this situation or during this period of time. In addition, medical cases or conditions should be under the observation because they might conflict the mother and her embryo then that require more and more attention to an embryo before the conception. Lifestyle and habits are causing and reasons of many reasons of dyslexia and these causes may affect the embryo in the womb which are alcohol, smoking cigarettes, drug, or tobacco during the period of pregnancy, diseases, and low nutrition, and we have to be considered these problems before conception (2011). According to one researcher, parents may be part of dyslexia causes if they do not give the child the chance to learn in school, and, in this case, the child will not learn basic academic skills. Researchers have believed that the poor quality of teaching in school might be a substantial cause of dyslexia because sometimes teachers do not choose the convenient way to teach subjects. Therefore, not enough time may be a cause of dyslexia because students with dyslexia need more time to acquire basic skills. Unfortunately, when teachers or parents move through subjects too fast it might cause reading disabilities. In addition, materials and curriculum may be caused of dyslexia because these may be too hard for

students who have dyslexia or the materials are not appropriate for them too. Often the materials may not be related to the topic or may be different than in real life (Nakra, 1996).

According to Gifty, Q. there are some other environmental causes, and they may affect the mother and her embryo, and may affect a child after birth, such as toxins, dirty water. Also, when a child stays most of the time alone without communication with other which is named isolation, and ignoring the child and does not contacting or giving feedback to him or her can be causes of dyslexia. When children grow up with poor nutrition and poor learning environment that may be caused of reading disabilities too (2007,30 July).

The Effects of dyslexia

According to *Dyslexia: An Overview/ Smart kids*, people with dyslexia may suffer of many problems, such as writing, spelling, doing a math, acquiring spoken language, and learning to read. Moreover, there are other problems that may have happened with people who suffer with reading disorders such as recalling specific words (days of week or months of year), reversing letters and numbers, organizing thoughts, and memorizing information (2015).

According to Lapkin, E. Dyslexia affects many skills, and children with reading disabilities suffer from communication, and they struggle to express themselves to other clearly. However, people with dyslexia have a problem that is namely; they struggle to explain their ideas during a conversation. Children and people with dyslexia have a problem to find the right word to say it in the conversation, and they suffer to what they are hearing during listening to people or to a radio then they feel upset and

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

frustrated to communicate with others. Students with dyslexia avoid making relationships with other students in school, and they avoid participating to school and group activities because students with reading disabilities are sensitive about these issues. Students with dyslexia may have a problem to understand jokes or sarcasm, and may think their classmates or other people laugh at them. There are other effects of dyslexia such as listening comprehension. Students with dyslexia may have problems with listening, but they are better listeners than readers. However, dyslexia may make it difficult to filter out the background that means children with dyslexia may have a problem to understand and to follow what the teacher says in a noisy classroom. Because of the noisy classroom they may miss a lot of information and knowledge, and students with reading disabilities may have been interrupted by anything easily. Also, it is hard to teachers to get students' attention because students with dyslexia have a problem with listening comprehension. In addition, students with dyslexia may have a problem with memory, and dyslexia can make it hard to remember. Children with dyslexia may take a long time to read a sentence then they may forget the sentence that came before it because they might not remember what they just read. So this might make it hard to understand the meaning of the sentence of the text. Similarity, students with reading disabilities may have a problem to remember what the homework is because they may do not know the announcement. As a result of this problem, teachers should write the important information and announcements on the board or in the notebook of the students. Navigation is one effect of these effects so children with reading disabilities might struggle with spatial concepts such as "right" and "left". They may get lost in school hallways, and they may do not know

where the location of the classroom is. Sometimes children with reading disabilities get lost in familiar places such as home, and they forget the location that they went before even when they visit this place before a short period of time. Nevertheless, time management may be affected by dyslexia so children with reading disabilities have difficulty telling time, and dyslexia may make it harder to stick to a schedule. A student with dyslexia may come late to the class because they have a problem managing their time (2014).

Dealing with dyslexia

According to Lapkin, E. there are many ways and people can help to deal with reading disabilities. However, some of them may work at school and some of them in the community such as teachers, parents, and specialists and they may help children with dyslexia at school or at home (2014).

At school

According to Lapkin, E. teachers can help children with dyslexia at school, and teachers may have many methods of reading. Also, teachers may try to use different approaches that may help a student with dyslexia. Child's school can do many things to help the child with reading disabilities such as the accommodations in class. Teachers can choose the convenient place for a child with dyslexia, and child with dyslexia should take a place in the middle of the class and in the second or third line. In addition, the good place will help a student with dyslexia to hear the teacher clearly and to see the board or the projector as well. Giving extra time student with reading disabilities on tests may help to deal with dyslexia because students with dyslexia read too slowly. Sometimes schools make someone to read the question for students with dyslexia and that will help a student with dyslexia to understand comprehension questions. However, letting students with

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

dyslexia use high-tech tools will help them to deal with dyslexia because these days students with dyslexia do not interest to use the pen and the notebook. Teachers may use normal supports to help students with reading disabilities such as sitting together in meeting to talk about student's mutual concerns, and the student will help the teacher to find what the problems are. Nevertheless, using a multi-sensory is one strategy that teachers use to help students with reading disabilities. This strategy is a method to link writing, reading, listening, and speaking, teachers use this strategy to help a student to remember these skills easily (2014).

At home

According to Lapkin, E parents can help their children with reading disabilities at home. But it could be a challenge for parents especially if they do not have knowledge about reading, writing skills. However, there are some strategies can parents use them to help children with dyslexia such as reading aloud and using audio books. Parents should read whenever they have a chance to read for their children, and they choose the convenient for child's age. For example, parents may read pictures books and read them with their children every night before they go to sleep. Also, there are many books which are appropriate for children such as Harry Potter. If the parents have teenagers they may read a magazine, articles, and newspaper and parents may give teenagers a chance to choose which type of these choices they want. In addition, reading any book is not good for children with dyslexia, the parents should choose the interesting books to children such as articles on sports, mystery stories, and pop stars. Choosing books is important, and parents should choose a good books for children's reading

level. Similarly, children with reading disabilities are more likely to engage through a book especially with great topics that can attract them. Using audio books is one strategy to deal with reading disabilities. These days parents can find this kind of books if they check the local library, and they can borrow audio recording of books. There are some stores sell audio books for children, and parents can also buy them online. Therefore, parents can look for apps and other high-tech which can help children who have dyslexia especially with spell-check a word processors. For older children, parents may use voice recognition software to tackle their writing assignments (2014).

In conclusion

Dyslexia is a common disability, it spreads these recent years. However, researchers have found that the most common disability is dyslexia. Scientists have found some causes of dyslexia such as genetics, inheritance, and environment, and they have found that children with dyslexia inherit dyslexia from their parents. Similarly, there are some causes from the environment such as poor nutrition, poor learning environment, materials and curriculum, and lifestyle for mothers. In addition, there are many effects of dyslexia not only in school but also in a home and the community such as communicating with others, reading, writing, spelling, and making friends.

The important point is dealing with reading disabilities at home and at school, and there are some people can help to deal with dyslexia such as parents and teachers. There are some ways to deal with dyslexia at home such as reading with children who have dyslexia, using high-tech, using audio books. Also, there are many ways and methods to deal with dyslexia,

An overview of Dyslexia: Causes and effects of dyslexia, and how to deal with dyslexia?

and teachers can use them to treat with students who have dyslexia such as using a multi-sensory, letting students with dyslexia use high-tech tools, and choosing the convenient place in classroom. However, scientists, parents, and teachers have to help each other to find what the symptoms, and they have to work together to find the causes in the early age of this problem which is dyslexia. Also, they have to find what are the appropriate methods to treat with people who have dyslexia, and they have to find the convenient materials to use to teach them. Finally, people with dyslexia are members of the community, and they do not have all their rights. People with dyslexia good education and medical service which is convenient with their problems. We have to create the curriculum which is appropriate with their obstacles, and we have to use a new technology to help children with dyslexia. People with dyslexia have to get their rights to live a good life without problems.

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