A comprehensive overview of dyslexia

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The literal translation of the word dyslexia means “ difficulty in reading”. Dyslexia (also referred to as specific reading disability) is a member of the family of learning disabilities; in fact, reading disability is by far the most common learning disability, affecting over 80% of those identified as learning disabled (Lerner, 2009). Dyslexia reflects an unexpected difficulty in reading in children and adults who appear to have all the factors present (intelligence, motivation, exposure to reasonable reading instruction) that are necessary to turn print into meaning (Shaywitz, 2006). Family history and genetics plays a large role in identifying a dyslexic individual, dyslexia being more common in someone who has a family history of reading issues. Individuals with dyslexia are usually of average or above average intelligence and tend to have specific learning difficulties with writing, reading, decoding and spelling. That is to say, in dyslexic individuals, their reading, especially reading fluency, is below that expected for a person of their level of education, intelligence, or professional status (Shaywitz et al., 2013).

Dyslexia Defined

The first report of dyslexia appeared in a literature piece entitled “ A Case of Congenital Word Blindness,” which recorded the observations of a British physician, W. Pringle Morgan, of his patient Percy F., age 14 years, in the British Medical Journal. Since Morgan’s first description over a century ago, the notion of dyslexia as an unexpected difficulty in reading has endured as parents, educators, clinicians, and investigators continue to become aware, both of the large numbers of individuals affected by the disorder, and also learn more about the basic mechanisms underlying it (Shaywitz & Shaywitz,

2008). Dyslexia is a lifelong disability representing a difference in brain organization. Research is beginning to suggest that the brains of individuals who are dyslexic reorganize and learn to compensate for the reading disability by using other parts of the brain (Perlstein, 2008). The angular gyrus (referred to in appendix A) is an area in the back of the brain, which sits at the junction of three brain regions that regulate vision, sensory, and emotional information (the occipital, temporal, and parietal lobes) (Richards, 2009). The angular gyrus acts as a pathway in processing sight and sound information that enables people to understand what they are reading. A study by Horwitz and Rumsey (2008), National Institute of Mental Health, found that men, who were dyslexic, even though they learn to read, did not make any of the functional connections in the left angular gyrus that normal readers would make. These men were not using the same networks and have found other ways to compensate. This interesting study suggests that individuals who are dyslexic were able to read beyond compensatory techniques (Horwitz & Rumsey, 2008).

Characteristics of Dyslexia

Characteristics of dyslexia represent an aspect of normal development; but in the individual who is dyslexic, the symptoms often persist past the time when it is normally integrated into the system. Each individual who is diagnosed as having dyslexia different from another individual who has dyslexia because these characteristics exist in different combinations and varying degrees of impact (Richards, 2009). Symptoms related to dyslexia can be broken down into three categories; oral language, written language and other. At any age, what comes easy to others may be hard for an

individual who is dyslexic and what may be hard for others, lets an individual who is dyslexic excel and succeed.

A group of high-risk factors of dyslexia exist that can be observed even as young as preschool. Prior to K-5 ages (5-12), other observable symptoms may indicate a future problem in the development of reading and writing skills in an individual. These high-risk factors are not limited to but include; late development of speech when compared to other age peers, articulation difficulties (inability to use /d/ or /t/ sound by age 5, difficulty saying blends like /gl/ for glasses, omission of sounds in sight or familiar words), difficulties sequencing sounds within words, difficulty following directions when compared to other age peers, difficulty learning names of colors- shapes- letters, struggle to rhyme words, slurring of words, confusion with simple directional terms such as up- down- left- right. Richards (2008) states that it is important to remember that no single symptom characterizes dyslexia and that a given individual will exhibit a cluster of symptoms, with each person’s cluster differing from every other person’s cluster.

When an individual beings to realize that they are unlike their peers, the onset emotions of discouragement, sadness and frustration follow. With these strong emotions and realization that they are unlike others, the action of avoidance comes to the forefront. Richards (2008) inquires that students with learning problems frequently submit written work that is brief and/or difficult to read. Many students may not even enjoy writing, so they avoid it altogether. Multiple reasons formulate why a student might avoid writing altogether. These reasons include but are not limited to; having a difficult time getting started with a writing task, forming letters is not an automatic

process, struggle to organize and use mechanics of writing, slow in retrieving the correct words to express ideas, inability to develop ideas fluently, struggle to keep track of thoughts and transfer them to paper and lastly, no matter how much time a student has spent writing it still turns out sloppy and not the way they had intended.

It is important for five to seven year old dyslexic child to understand that writing is speech written down. Richards (2008) states that in today's society, spoken language often contains multiple, incomplete sentences and slang expressions and that slang does not belong in technical written language. Students learn to speak by listening to and practicing language and learn to write by reading and practicing writing. This process is made possible when a student has confidence in and is excited by the writing process, not discouraged and avoiding it. The process of writing consists of many sub skills but one in particular is crucial to any dyslexic student's writing and education process. Automaticity at any level is imperative because it allows the student to attempt more cognitively difficult skills at each stage in the writing process. When a student is overloaded with information, automaticity is decreased immensely. Richards (2008) claims that automaticity does not mean that a student must have perfect skills, such as grammar, spelling or punctuation, and it is not the same as mastery of a given skill. Richards (2008) goes on to state that automaticity indicates that a student is able to perform automatically, demonstrating a level of proficient and ease of performance, which will allow him or her to integrate skills and progress in writing development. A dyslexic student does not need to show a mastery of skill, but that they are able to recall a skill

automatically, allowing the student to use that skill fluently and confidently. Confidence is key, without it a dyslexic student obtains much of nothing.

One major and imperative skill set not present for a dyslexic student is the process of hearing and distinguishing sounds. Phonological awareness is the conscious awareness that words are composed of separate sounds (Richards, 2008). Phonological awareness is not phonics, but the ability to learn phonics is dependent on phonological awareness. A dyslexic child is unable to realize that there are four speech sounds in the word grass. A child who is not dyslexic would be able to break down speech sounds, easily recognize and judge mismatched caused by letter omission, letter addition, sequence reversal, syllable omission or other errors (Richards, 2008). Without phonological awareness, phonics will make no sense. Phonological awareness is a major component in considering a diagnosis of dyslexia.

Accommodations and Treatment for Dyslexia

Dyslexic individuals will face struggles and adversities no matter what. Luckily, many strategies and interventions are available to make coping with a life-long learning disorder manageable. Compensations and remediation are two forms of intervention that may be implemented in the classroom setting. Compensations are techniques that avoid the problem at hand, this case being dyslexia, and reduce the negative impact on learning. More commonly referred to as accommodations, compensations may include avoiding difficult or altering assignments. In using compensations, an individual could receive assistance, possibly books on tape and extended time on assignments. Remediation provides additional structured practice

and re-teaching of a skill or concept at hand using techniques that coincide with an individual’s processing style.

In order to strategically analyze a dyslexic student’s struggle, one must look to the source of the child’s confusion and difficulty. The breakdown point where an individual begins to struggle must be identified as well as the components of the task that are causing the confusion. Activities that differ from tradition phonics games have been known to work extremely well with dyslexic children (Richards, 2008). One strategy involves an individual to count words in a sentence using a concrete manipulative and kinesthetic activity, for example: an individual uses blocks to represent each word in the sentence or have an individual walk taking one step for each word in a sentence and say each word as they take the corresponding step. Another kinesthetic activity would be to have the individuals represent the words in a sentence and have the individuals figure out their words and put them in the correct sequencing order to make the sentence correct. Other strategies include blending words (the word ham: /h/+/a/=/ha/, /m/ that makes /ha/+/m/= ham) or recognizing verbal cues when writing letters (the letter a would be “ around and down”, the letter b would be “ tall stick down, halfway up and around”). Strategies, if implemented correctly, become the key to a dyslexic individual feeling a sense of accomplishment and self-worth. A dyslexic individual may feel as if they are different from their peers, but as long as they encounter positive praise and experience meaningful skills, their avoidance and disappointment will be no longer.

Conclusion

This specific learning disorder affects many aspects of a person’s life. These individuals appear to have all the factors present (e. g. intelligence, motivation, exposure to reasonable reading instruction) that are necessary to turn print into meaning, although they are impaired to do so. While it may be frustrating, dyslexia is by no means a debilitating disorder. Many famous persons, including Nelson A. Rockefeller, Albert Einstein and Sir Winston Churchill, lived with dyslexia yet never let it inhibit or hinder their lives. Individuals should not be defined by a disability, but rather by their skills and talents. In seeking the correct implementation of identification and strategies, all dyslexic individuals would be given the chance to succeed and grow.

References

- Horwitz, B., Rumsey, J. M., & Donohue, B. C. (2008). *Functional connectivity of the angular gyrus in normal reading and dyslexia* . (95 ed., Vol. 15, p. 8939–8944). Retrieved from http://www. ncbi. nlm. nih. gov/pmc/articles/PMC21181/
- Lerner, J. (2009). Educational interventions in learning disabilities. Journal of the American Academy of Child & Adolescent Psychiatry, 28, 326–331.
- Perlstein, D. (2008, February 18). *Dyslexia* . Retrieved from http://www. medicinenet. com/dyslexia/article. htm
- Richards, R. G. (2009). *The source for dyslexia and dysgraphia* . East Monline, IL: Linguisystems Inc.
- Shaywitz, S. E. (2006). Dyslexia. Scientific American, 275, 98–104.

- Shaywitz, S. E., & Shaywitz, B. A. (2008). Paying attention to reading: The neurobiology of reading and dyslexia. *Development and Psychopathology, 20* (4), 1329-49. doi: http://dx. doi. org/10. 1017/S0954579408000631
- Shaywitz, S., Shaywitz, B., Fulbright, R., Skudlarski, P., Mencl, W., Constable, R., et al. (2013). Neural systems for compensation and persistence: Young adult out- come of childhood reading disability. Biological Psy- chiatry, 54, 25–33.