

EMOTIONAL DISTURBANCES AND DISCRIMINATION EXPERIENCED BY DYSLEXIC CHILDREN

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ABSTRACT

Dyslexic children often had to face many psychological problems due to their inability to deal with language issues. The present research investigation aims at understanding the emotional disturbances and sense of discrimination faced by dyslexic children. For this purpose, 80 male and female children (40 Dyslexic and 40 Non-dyslexic) of age 6-12 years were examined. The children were identified fulfilling the inclusion and exclusion criteria and assessed individually on the working memory and attention tests (NIMHANS Battery 2004). Discrimination and Stigma Scale (Thorncroft et al., 2008) and Scale for Assessing Emotional Disturbances (Epstein & Culliman, 2010) were applied to assess the sense of discrimination and emotional disturbances experienced by the participants. The results indicate an existence of a significantly greater degree of emotional disturbances and feeling of discrimination among the dyslexic children as compared to non-dyslexic children. These findings advocate strong relationship between learning disability emotional problems and stigma in children.

KEYWORDS: Dyslexia, Learning Disability, Emotional Disturbances, Discrimination, and Stigma

INTRODUCTION

Learning disabilities are professionally diagnosed as having difficulties with reading, writing, speaking, listening, spelling, reasoning or doing the math. People with learning disabilities have trouble understanding through their senses and processing that information accurately. Dyslexia is co-morbid with a general language disability along with reading problems (Peterson, McGrath, Smith, & Pennington, 2007) or attention deficits. One of the most basic misunderstanding about this condition is that dyslexia is a problem of word or letter reversals (b/d, was/saw) or of letters, words, or sentences "dancing around" on the page (Rayner et al, 2001). Longitudinal research shows that girls and boys are equally affected by dyslexia (Haywitz, Shaywitz, Fletcher, & Escobar, 1990).

Dyslexia is a form of a neurological disorder which handles interference in the acquisition of language. Many difficulties associated with dyslexia can be traced back to a malfunction of the medial geniculate body in the thalamus. One study provided confirmation for cerebellar impairment outside the motor domain: dyslexics were revealed to be poor in time estimation task (Nicolson, Fawcett, & Dean, 2001), assumed to tap the timing functions of the cerebellum (Ivry&Keele, 1989). Shaywitz (2003) multiple pathway model, there are multiple pathways in the brain that modulate

various features of the reading process. These consist of two slow pathways which dyslexic readers over-rely upon, and one quicker pathway used by normal readers.

- Broca's Area, which is the inferior frontal gyrus, reads by slowly sounding out words. The end point of the inner articulation system.
- Parietal-Temporal, which is the Supramarginalgyrus region, slowly pull words apart by interpreting the spatial arrangement of sounds. Crucial in the spelling process.
- Occipital-Temporal region automatically acknowledges word forms. Dyslexics tend to under-activate this region.

EMOTIONAL DISTURBANCES

The relationship with learning disabilities and emotional/behavior problems is complex. One area of interest to researchers has been the association between learning disabilities and psychopathology. A behavioral/emotional disorder includes the following criteria:

- The behavior breaks from age, cultural and social norms.
- The student's behavior deviates in a significant manner from that expected for the situation.
- Inappropriate behavior is consistently displayed in at least two different settings.
- The behavior may be compulsive, impulsive, sad or withdrawn.
- The behavior may represent poor interpersonal relationships

In a study conducted by Cantwell and Baker (1991), 600 children were recognized as language/speech impaired, and among these children 300 were followed up for five years. The findings revealed that of these children, 25 percent had learning disabilities and 75 percent of the learning disabilities children had a psychiatric illness. The most prominent diagnosis found among them was depression. On the contrary, it has been pointed out that the prevalence of depression in LD children is same as that of the general population. But the children who have both depression and learning disabilities reported to have low self-esteem, had a bleaker view and were more detached, than depressed children without learning disabilities.

Another area of concern is the correlation between learning disabilities and somatic complaints. A study conducted by Margalit and Raviv (1984) used two control groups to compare the prevalence of somatic complaints in children with learning disabilities. The somatic complaints in LD group were 54 percent as opposed to 13 percent and 9 percent in the two control groups. The chief complaint amongst the LD group was fatigue.

A third area of concern where learning disabilities and behavioral problems coexist is with social behavior. Usually, children with learning disabilities have problems with familial and peer relationships that may be the result of processing problems that make it difficult for LD children to pick up social cues which further leads to avoidance behavior. This type of behavior is often used as a defense to cope with the stress generated by social interactions. The children who are unable to develop these defenses may use aggressive or irritable behavior to deal with stress associated with social interactions.

When learning disabilities and emotional problems appear together, it is important to identify whether the emotional problem is secondary to the learning disability or it is associated co-morbidly. When the emotional disturbance is caused by the learning disability, dealing with the learning disability may be seen as the solution. When it is co-morbid, the solution becomes more complicated, as the emotional problem has to be treated separately from the learning disability. Physicians often face difficulties while dealing with the complexity of coexisting learning disabilities and emotional problems, finding a solution may become a process of trial and error.

Some people with learning disabilities have isolated obstacles in writing, reading, or mathematics. But most people with learning disabilities have more than one area of difficulty. Silver (1998) asserts that "learning disabilities are life disabilities". The same disabilities that interfere with writing, reading, and arithmetic also will interfere with other activities like sports, family life, and getting along with friends" (Silver, 1998). Typically, students with LD have other major difficulties in one or more of the following areas:

- Time management
- Motor coordination
- Attention
- Processing speed
- Organizational skills
- Emotional maturation
- Social skills required to make friends and maintaining relationships
- Memory
- Verbal expression

Another emotional difficulty for adults with learning disabilities is fear. Feelings of fear may be associated one or more of the different types of fears e.g. fear of failure, fear of judgment or criticism, fear of rejection, and fear of being found out. They develop coping tactics to hide their disability. For example, an adult who can barely read might act like reading a newspaper. Other adults may acquire gregarious personalities to hide their struggles or focus on other abilities that do not have learning barriers. Unfortunately, some adults develop negative strategies such as leaving their job rather than risking the humiliation of being fired because their learning disability makes it challenging for them to keep up with work requirements.

The fear of being found out is especially upsetting for many older adults who have an inappropriate support or those who have never been diagnosed with a learning disability. Such adults were commonly misdiagnosed as mental retardation, inappropriately placed in programs for the mentally challenged and stigmatized by classmates and teachers. During adult life, they often return to learning through adult literacy programs to make up for the lost educational opportunities. Seeking for help is a difficult step for these adults because it requires them to stop hiding their particular disability. The simple act of entering into a classroom can be an anxiety-producing experience for adults who have been wrongly labeled or mistreated by the educational system. For these adults, returning to a learning environment is truly an act of courage.

The national adult literacy survey, 1992, affirmed that 58% of adult with self-reported learning disabilities lacked the basic functional writing and reading skills needed for a job and academic success (Kirsch et al., 1993). Most of these adults do not graduate from high schools due to the failure of the school system to recognize or accommodate their learning disability. Fortunately, adult literacy programs are a second chance for learning disabled person to learn the basic academic skills missed out in public school. However, going back into an educational environment is often a terrifying experience for adults with learning disabilities. One of the principal reasons for this is the fear of failure. The tendency for adults with learning disabilities to personalize failure may be associated with emotional disturbances.

One positive characteristic that often helps adults to overcome their fear of failure is their capability to come up with innovative tactics to learn and resolve the problems. These strategies are often attributed to the "learned creativity" that many adults with learning disabilities develop to cope with the educational, social, and vocational demands in their everyday lives. (Gerber, Ginsberg, & Reiff, 1992).

Adults with learning disabilities commonly fear the ridicule of others. Unfortunately, these fears often develop after the individual has been routinely ridiculed by classmates, teachers or even family members. The most crushing of these objections usually relates to a perceived unfair judgments or lack of intelligence about the person's ability to succeed or degree of motivation. For example, comments such as 'you could do it if you only tried harder', 'you'll never amount to anything'. For many of these adults, particularly those with unidentified learning disabilities, negative criticisms, continue to affect their emotional well-being into their adult years. It is typical for adults with learning disabilities to internalize the negative criticisms and view themselves as lazy, stupid, dumb, and incompetent.

Many adults with learning disabilities in its most extreme form see themselves as more emotionally sensitive than other people; high levels of emotional sensitivity are both a blessing and a weakness. The positive features of this trait help adults with learning disabilities build meaningful relations with different people. However, this strength becomes a weakness due to its ability to overwhelm the individuals. Difficulties with emotion arise when they are unable to cope with the onslaught of emotions. Highly sensitive adults with the learning disability may be moved to tears more easily, they also feel they're own, as well as others pain more deeply. Thomas West, writer of "the minds' eye", not only gives a thorough description of Winston Churchill's learning disability, but he also describes his sensitive nature. Thomas West reveals Churchill's tendency to break into tears quite easily" (West, 1997) even out in the public.

Difficulties with regulating emotions are commonly seen in highly sensitive adults with learning disabilities (Walker, 2000). Self-regulation problems commonly occur in those with learning disabilities in its most extreme form; individual may readily shift from one emotion to the next. Others may experience difficulty regulating impulsive thoughts or actions (Walker, 2000). Nevertheless, some adults may be so profoundly affected that they suffer from depression or have anxiety. A lack of school, job or social accomplishment will possibly add to this emotional burden. Some adults with LD, particularly those who have been ridiculed by their teachers or peers or family members may be more prone to take criticism to heart because of their experiences and their ultra-sensitive nature. Emotional hurts from childhood and youth may cause intensified emotional responses to rejection. As a result, social phobia and social anxiety may occur.

Children with learning disabilities may favor procedures to stay the same and have a hard time shifting from one activity to another. For example, some adults may struggle to move from one work task to another without entirely

finishing the first task. Adults having learning disabilities are usually described as inflexible when it comes to recognizing another person's viewpoint or a diverse way of doing something.

STIGMA AND DISCRIMINATION

People growing up with a learning disability frequently have a sense of shame. For some, it is a big relief to receive the diagnosis while for others the label only serves to stigmatize them further. Discrimination and stigma occur when people with learning disabilities are treated differently from others (Thornicroft et al., 2008). These feelings of disgrace often cause these individual to hide their difficulties. Rather than risking being labeled as stupid or accused of being lazy, some adults deny their learning disability as a defense mechanism. Internalized negative labels of incompetence and stupidity usually result in a poor self-concept and lack of confidence (Gerber, Ginsberg, & Reiff, 1992). Some adults feel embarrassed about the type of challenges they are striving to cope with such as attention difficulties, slow processing, basic literacy skills, organizational difficulties, chronic forgetfulness, etc.

Certain myths about learning disabilities have contributed towards negative perception and stigma about learning disabilities e.g. people with learning disabilities have below average intelligence and cannot learn. However, people with learning disabilities have average to above average intelligence (Gerber, 1998). In fact, many studies show that as many as 33% of students with learning disabilities are gifted (Jones, 1986; Baum, 1985; Brody & Mills, 1997). With appropriate recognition, intervention and lots of hard work, adults and children with learning disabilities can learn and succeed.

Some people stigmatically perceive that learning disabilities are just an excuse for irresponsible, unmotivated or lazy people. Learning disabilities are not caused by any flaws in character but are due to neurological impairments. The National Information Center for Adults and Youth with Disabilities made a statement that people with learning disabilities are not unmotivated or lazy (Nichcy, 2002). The focus of the present investigation is to understanding the emotional disturbances and sense of discrimination faced by dyslexic children.

METHODS

Sample

A total of 218 students were administered NIMHANS Index for SLD as per the predetermined criteria. Among them, 40 students were found to have SLD as the performance was found to be two grades below. In total 80 children of 6-12 years were taken purposely from different schools and institutions from Chandigarh and Panchkula. Out of which 40 were exclusively identified dyslexic and 40 were non-dyslexics. The efforts were also made to match the two groups of samples in terms of their educational level and socio-economic status.

TOOLS USE

NIMHANS Neuropsychological Battery 2004 (Rao, Subbakrishna, Gopukumar, 2004)

The NIMHANS Battery developed by the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, is an index to assess children with learning disability. The battery provides a comprehensive assessment of neuropsychological functions such as motor and speech functions, Visio-spatial functions and learning and memory functions. It was used to identify cases that could be exclusively categorized as learning disabled and non-learning disabled. The standardized battery with accepted norms was used. It consisted of language test (spelling, writing, reading, and comprehension), attention test (number cancellation), auditory memory test, arithmetic (multiplication, division, addition, subtraction, and fractions) and visual-motor skill (Bender Gestalt test). This battery has a face and content

validity. If the child's performance was two classes below what was expected for him/her, the diagnosis of a particular developmental disorder of scholastic skills was made as per ICD- 10. Test-retest reliability of the battery varies between 0.59 to 0.92. The battery has also shown adequate validity in lateralization and localization of brain dysfunctions (Kar et al., 2004). These tests are employed for three 3-4 sessions for 6 hours in each session.

Discrimination and Stigma Scale (Thornicroft et al., 2008)

The DISC Scale was originally designed for use by experienced interviewer in the International Study of Discrimination and Stigma Outcomes (INDIGO) to interview person with a clinical diagnosis of mental illness to study the personal impact on that particular condition present in his or her life. The objective of the scale is to collect information to enhance the understanding of having a diagnosis of mental illness that influences social and personal life. There are 34 questions that are to be asked of the subjects, each question is followed by four-choice response ranging from 1 = not at all, 2 = a little, 3 = moderately and 4 = a lot.

In the present research investigation, it was used to study the stigma and discrimination experienced by the dyslexic children due to the learning disability. It was explored that how these children feel he or she has been treated differently, compared with children who do not have such problems. There are four parts to this interview. Each part asks about how you have been treated or what you have done in different situations:

- In the first part, they were asked about times when they have been **treated unfairly** because of learning disability. There were 22 questions.
- In the second part, they were asked about times when they have **stopped themselves** from doing things because of how others might respond to their learning disability. There were four questions.
- In the third part, they were asked about how they may have **overcome stigma and discrimination**. There were two questions.
- In the fourth part, they were asked about any times when they have been **treated more positively** because of their learning disability. There were six questions.

In each part of the interview, they were asked whether each event has happened, **not at all, a little, moderately or a lot**. It is a reliability and validity method of assessing the experience of discrimination and stigma (Thornicroft et al., 2008).

Scale for Assessing Emotional Disturbances (Epstein & Culliman, 2010)

Scales for Assessing Emotional Disturbance-Second Edition" (SAED-2; Epstein & Cullinan, 2010), is an assessment system which is primarily designed to aid in determining the eligibility for special education services under the category of emotional disturbance. It is norm-referenced, 45-item teacher rating scale, for students ranging from age between 5 years and 18 years. The second edition adds two supplemental forms: the Developmental/Educational Questionnaire and an Observation Form. The Rating Scale covers each of the five characteristics to qualify as ED, i.e., relationship problems, inappropriate behavior, inability to learn, depression or unhappiness, and physical symptoms or fears). Scores from these subscales are used to calculate an overall estimate of emotional/behavioral difficulties, the Rating Scale Index (formerly SAED Quotient). The SAED-2 has three parts, each of which may be used singly or in several combinations of two or three:

Rating Scale

A reliable, standardized, norm-referenced instrument subsisting of seven scales: (1) Inability to Learn, (2) Relationship Problems, (3) Inappropriate Behavior, (4) Unhappiness or Depression, (5) Physical Symptoms or Fears, (6) Socially Maladjusted, and (7) Adverse Effect on Educational Performance.

Developmental/Educational Questionnaire

A supplemental assessment tool designed to collect information from the student's parent or other primary caregivers.

Observation Forms

An additional assessment tool that relies on observation methods to evaluate emotional problems of students, target behaviors, classroom behavior. It measures noticeable aspects of the five federal definitions of ED characteristics: (1) Inability to Learn, (2) Relationship Problems, (3) Inappropriate Behavior, (4) Unhappiness or Depression, and (5) Physical Symptoms or Fears).

In the present research investigation, the seven subscales rating scale was used to study emotional disturbances. The appropriate content sampling using SAED yielded coefficients that all exceed 0.75. The correlations ranged from 0.51 to 0.84. Epstein and Cullinan analyzed the content, criterion-related and constructed validity of the SAED. All coefficients were above 0.39 with most of them were in the 0.6 and 0.7 range. These results show a high degree of content validity.

PROCEDURE

For the collection of data, the authors visited various schools and contacted the principal. Subjects from the school were contacted; each subject was briefed about the tests to be conducted, and a proper rapport was established, so as to increase the number of genuine responses. Then later on the subjects were presented with the tests and proper instructions were given. The scores of each child were recorded and analyzed as per the objective of the study.

RESULTS

In the present study, the statistical analysis used was mean, standard deviation, t-test to analyze the data to see the significance difference between the two groups.

S.No.	Measure Category	MEAN		SD		t-Ratio
		Dyslexic	Non-Dyslexic	Dyslexic	Non-Dyslexic	
1.	Inability to Learn	15.42	10.56	3.36	2.11	7.74**
2.	Relationship Problems	13.47	11.57	3.78	3.47	2.34*
3.	Inappropriate Behaviour	12.65	11.74	3.55	2.88	1.25
4.	Unhappiness/Depression	11.54	10.64	3.65	2.28	0.73
5.	Physical Symptoms or Fear	11.36	10.96	2.19	2.79	0.71
6.	Socially Maladjusted	13.42	11.54	2.49	2.54	3.34**
7.	Adverse Effect on Educational Performance	16.28	9.52	1.47	2.74	13.73**
8.	Treated Unfairly	48.45	36.14	7.42	6.36	7.96**

9.	Stopped Themselves	10.45	9.34	2.65	2.84	1.80
10.	Overcome Stigma and Discrimination	4.11	3.98	1.14	1.84	0.37
11.	Treated more Positively	10.12	9.36	2.45	2.74	1.30

**significant at 0.01 level *significant at 0.05 level

The findings have indicated that the two groups differed significantly on the inability to learn dimension of emotional disturbance $t = 7.74$, $p < 0.01$. Dyslexic children (Mean = 15.42) experienced greater inability to learn as compared to non-dyslexic children (Mean = 10.56). Dyslexic and non-dyslexic children differed significantly on relationship problems dimension of emotional disturbance $t = 2.34$, $p < 0.05$. Dyslexic children (Mean = 13.47) experienced greater relationship problems as compared to non-dyslexic children (Mean = 11.57). Dyslexic and non-dyslexic children differed significantly on the socially maladjusted dimension of emotional disturbance $t = 3.34$, $p < 0.01$. Dyslexic children (Mean = 13.42) experienced greater social maladjustment as compared to non-dyslexic children (Mean = 11.54). Similarly, dyslexic and non-dyslexic children differed significantly on adverse effect on educational performance dimension of emotional disturbance $t = 13.73$, $p < 0.01$. Dyslexic children (Mean = 16.28) experienced greater adverse effect on educational performance as compared to non-dyslexic children (Mean = 9.52).

Dyslexic and non-dyslexic children differed significantly on treated unfairly dimension of discrimination and stigma, $t = 7.96$, $p < 0.01$. Dyslexic children (Mean = 48.45) experienced greater unfair treatment as compared to non-dyslexic children (Mean = 36.14). The difference in inappropriate behavior was not found to be statistically significant, unhappiness/depression, physical symptoms or fear dimensions of emotional disturbance and stopped themselves, overcome stigma and discrimination, and treated more positively dimensions of discrimination and stigma.

DISCUSSIONS AND CONCLUSIONS

The findings have indicated that dyslexic children (Mean = 15.42) experienced greater inability to learn as compared to non-dyslexic children (Mean = 10.56). Dyslexic children (Mean = 13.47) experienced greater relationship problems as compared to non-dyslexic children (Mean = 11.57). Dyslexic children (Mean = 13.42) experienced greater social maladjustment as compared to non-dyslexic children (Mean = 11.54). Dyslexic children (Mean = 16.28) experienced greater adverse effect on educational performance as compared to non-dyslexic children (Mean = 9.52). These findings advocate strong relationship between learning disability and emotional problems in children. It could be that learning disabilities may increase emotional disturbances in the children as they find it difficult to deal with their educational demands. Cantwell and Baker (1991) concluded that greater no. of learning disabled children experience psychiatric problems in their life.

Many children with learning disabilities have trouble in performing basic everyday tasks such as budgeting, shopping, reading a recipe or filling out a job application form. They may also have difficulty with making friends and maintaining relationships. All such problems might lead to emotional disturbances in these children. Adults with learning disabilities frequently experience fear of rejection. If they belong to a middle-class or upper-class family where academic achievement is a basic expectation for the members, fear of rejection may be a very real concern. They may also fear that their social skill deficits will limit them from building good relations with others, and this also may lead to social rejection. Children having prior experiences of rejection may intensify this sense of fear.

Difficulties with emotion arise when they are unable to cope with the onslaught of emotions. Highly sensitive adults with the learning disability may be moved to tears more easily, they also feel they're own, as well as others pain more deeply. Thomas West, writer of "the minds' eye", not only gives a thorough description of Winston Churchill's learning disability, but he also describes his sensitive nature. Thomas West reveals Churchill's tendency to break into tears quite easily" (West, 1997) even out in the public.

Difficulties with regulating emotions are commonly seen in highly sensitive adults with learning disabilities (Walker, 2000). Self-regulation problems commonly occur in those with learning disabilities in its most extreme form; individual may readily shift from one emotion to the next. Others may experience difficulty regulating impulsive thoughts or actions (Walker, 2000). Dyslexic and non-dyslexic children differed significantly on treated unfairly dimension of discrimination and stigma. Dyslexic children (Mean = 48.45) experienced greater unfair treatment as compared to non-dyslexic children (Mean = 36.14). . Discrimination and stigma occur when people with learning disabilities are treated differently from others (Thornicroft et al., 2008). These feelings of disgrace often cause these individual to hide their difficulties. Rather than risk being labeled as stupid or accused of being lazy, some adults deny their learning disability as a defense mechanism. Internalized negative labels of incompetence and stupidity usually result in a poor self-concept and lack of confidence (Gerber, Ginsberg, & Reiff, 1992). Some adults feel embarrassed about the type of challenges they are striving to cope with such as attention difficulties, slow processing, basic literacy skills, organizational difficulties, chronic forgetfulness, etc.

Certain myths about learning disabilities have contributed towards negative perception and stigma about learning disabilities e.g. people with learning disabilities have below average intelligence and cannot learn. However, people with learning disabilities have average to above average intelligence (Gerber, 1998). In fact, many studies show that as many as 33% of students with Learning Disabilities are gifted (Jones, 1986; Baum, 1985; Brody & Mills, 1997).

Some people stigmatically perceive that learning disabilities are just an excuse for irresponsible, unmotivated or lazy people. Learning disabilities are not caused by any flaws in character but are due to neurological impairments. The National Information Center for Adults and Youth with Disabilities made a statement that people with learning disabilities are not unmotivated or lazy (Nichcy, 2002). Dyslexic students lack a suitable education when they are taught at a mismatched level with other students who are significantly above their level. Children having learning disabilities may have difficulties with social, home, academics and emotional aspects (Neeraja & Anuradha, 2014).

To conclude there is a greater degree of emotional disturbances and to feel of discrimination among the dyslexic children as compared to non-dyslexic children. Emotional difficulties occur when the children are unable to cope with the educational demands. They may also fear that their deficits in social skills will limit them from building meaningful relationships with others, and this may cause social rejection. Many children with learning disabilities have problems in performing basic everyday living tasks that may add to their misery. These findings advocate strong relationship between learning disability emotional problems and stigma in children.

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