

## Dyslexia Management through Ayurveda: A Conceptual Study

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### Abstract:

Dyslexia is considered as one of the category under learning disability. Dyslexic patient indication the symptoms like, word recognition, difficulties with word accuracy and/or fluent and they are not that good with spelling and decoding abilities. It hampered the children's ability to growth through later stage of development. Dyslexia is neither the result of poverty nor it is hearing impairments and developmental delay. The prevalence rate of the dyslexia in the Indian children is about 10 to 15 %. The research suggests that huge prevalence rate of the specific learning disabilities of estimations in India. Ayurveda say that learning is a outcome of stir successive and the complex interaction of Mana (psyche), Buddhi (intellect), Atma, Indriyas(cognitive and motor organs) and Indriyartha (sense organs). And it is shows that Ayurvedic drugs (see table 1) (medhyarasayan or memory enhancer) and preparation directly or indirectly improveth the intellect and cognitive power. It exhibits the great result in the neurobiological condition.

### Keywords:

Ayurveda, Buddhi, Dyslexia, Learning disability Manasroga, Medhya Rasayan, Memory enhancer, Neurobiological condition.

### Introduction:

Dyslexia is considered a certain type of learning disability. Its origin is not yet clear but it is contemplated as neurobiological in origin as per some evidence. Dyslexic patient have problem with word recognition as well as with words accuracy and/or fluency. They face dilemma with decoding and with the word's spelling. All these complications are mostly due to the effects of the lack of the some segment of language i.e. Phonology. The phonological language is uncommon as compared to the cognitive skills and the provision of effective classroom teaching.<sup>[1]</sup>

There are big confusion among the especially in parents about the Dyslexia and specific learning difficulties (SpLDs). They are come under same category but show the difference. They are diagnosed by their daily works like they have problem during reading words, unable to understand what they read, Problems reflect while writing word, they have short-term memory, hand control and visual processing. Dyslexic children are having the problem with time management, confusions with direction and have issue interpersonal skills. These difficulties in the children can cause great frustration among them, but always keep in mind that dyslexic diagnosed children have the highest and more the average intelligence. It is seems that the prevalence rate of Male is more, i.e. approximately 75% to 80%. These people are extremely good at some areas; still it's hard for them to reach at their desire potential in the academic field. In this case it is important to diagnose dyslexia in early stage for the betterment of the medication planning, for proper counseling to their parents and themselves. It makes thinks easy for them, and they start working toward solution instead of blaming, frustrating, feeling psychologically disturbed. However, it is very difficult for the unidentified cases to put in the needed help and the support. Many people beside with dyslexia have other specific learning difficulties; usually they had dyscalculia, dysgraphia, and dyspraxia or attention deficit hyperactivity disorder.

Dyslexia is neither the result of poverty nor it is physical disability like hearing impairments, developmental delay, second language learning, speech, but also those conditions put children more at risk for developing a reading disability (Snow, Burns, & Griffin, 1998).<sup>[2]</sup>

Ayurveda compendium said that learning is a outcome of stir successive and the complex interaction of Mana(psyche), Buddhi(intellect),Atma, Indriyas(cognitive and motororgans) and Indriyartha (sense organs).<sup>[3]</sup> The activities give above are over ruled by Tridosha (vata, pittaandkapha) and Triguna (Sattva, RajaandTama) in a balanced state as well as the special coordination.<sup>[4]</sup> Any non equilibrium state of Tridosha and Triguna will cause disease related to the functioning of Indriya, Manaand Buddhi.<sup>[5]</sup> That leads to the impaired learning that may cause disease like Dyslexia. Thus, in this condition, Ayurvedic drugs will help in the management of the dyslexia by maintaining the equilibrium state of these tridoshaandtriguna. This is done by adding the Medhya (intellect remoting) drugs in the treatment of such cognitive deficit and intellect issue for improving this learning ability in these children.

It's hard to evaluate the symptoms of dyslexia at an early age as it is a learning disability so, when the children starting schooling the Symptoms usually noticed i.e. at the age of 5 or 6 years in age. When performing the cross sectional study among the small population of the children in India it shows the prevalence rate is 11.2% in dyslexia. This indicates that large population of the Indian education system is not able to read their own mother tongue. Furthermore, there is lack of awareness in the population about learning disability i.e. dyslexia. This hamper the future of the teenage just because of these problems they stop their schooling. That why it is important to diagnosis this type of Learning Disabled Students at early stage.

Classical Textbooks, Various published articles online and offline, website data, newspapers articles are used for the discovery and reviewing dyslexia for that words are used Dyslexia, Medhya according to Ayurveda, and drugs, Learning disability and memory.

## **Review of Disease:**

### **A. Dyslexia in Children-**

For Early identification there are some signs and symptoms that helps to diagnose the pre-school child is dyslexic.

Following factors are commonly found in the Dyslexic Children-

1. There may have history dyslexic or other learning problem in their family.
2. The child may suffer from speech delayed or unclear speech.
3. The child faces problem while dressed up, doing up buttons and laces of the shoes and putting shoes on the correct feet.
4. Sometimes the child love to hear the store, but they didn't show concentration while writing the word or may not have any interest in the writing.
5. Sometimes the child seems to be lazy and inattentive or has an attention deficit
6. They are usually facing problems in hopping, tripping, catching a ball bumping, falling over, , skipping.
7. Child cannot catch or follow a rhythm
8. Has difficulty in identifying colors, the might say blue is green, red is yellow, etc.
9. It is difficult for them to find the correct word or might use a word in different context.
10. Child gets confused between some actions and opposite words, like under/over, up/down
11. Difficulty in differentiating some similar sounding words.
12. The child might face difficulty in proper sequencing of the days of week, numbers, alphabet using colored beads, and thread green, red, blue, white.
13. Difficulty in holding a pen or pencil might hold too tightly or lightly.
14. When the child spell and read they get confused in the letter which look similar like, d- b, u-n, m – n, etc.
15. The child having confusion in the letter that sound similar like v, f, the, etc
16. Child having the propensity to reverse words like was- saw, now-won.
17. They rearrange words from left – feel, and so on.
18. They read a word correctly but at same time they read it wrongs at different page.

19. Child changes the words while writing or reading like “The cat sat on the mat”they do “the mat sat on the cat”.
20. Confused in the small words like of, for, from.
21. Child having difficulties while reading sentence by keeping the word at correct place on a line and they usually loses his place.
22. Some are read appropriately but failed to understand what they are reading.
23. Child has confusion while writing. And sometime they don't which hand is used for writing like his right or left hand.
24. Sometime dyslexic child may wrongly put capital letter or may use in wrong places while writing.
25. Common mistakes are seen during writing like they forget to put dot in small T 'and cross T, May write alphabet and numbers badly.
26. While writing over the page they may use margins or while writing form slop.
27. They practice punctuation at wrong place or the forget to use it at all. Same happen with paragraphs.

Some of the positive traits found in Dyslexic children are as follows-

1. Children can be quick thinkers and have a lot of original thoughts
2. They are highly creative and artistic
3. They have great aptitude. They can used that for construction games like building blocks, or remote control and keyboards
4. The child might perform bright but it is difficult for them to do a thing which is simple for us.

### **B. Dyslexia in Adult dyslexia**

People having Dyslexic are extremely creative and original. They commonly get to the top through their hard work and complete determination or fortitude toward their works. They consider as the most important person of the working group. Most of the dyslexic is best in some area like,

1. Art
2. Electronics
3. Physics
4. Sports
5. Mathematics

6. Construction

7. Architecture

8. Computer sciences

9. Engineering entertainment.

Adult who is suffering from dyslexia are not diagnosed yet. Today, some of them come forward unrecognized the disease and ask for help. Dyslexics having a problem in their work environment such as they face problems while filling forms, writing letters, etc. and they always try to hide their disabilities. It is seen that people with dyslexia suffer from lack of confidence, self-esteem and fall less for employment ability. Even so often they are realized that their rate of progress reduced due to dyslexia and after diagnose they receive proper treatment.

These are the point which show that the adult have dyslexia

1. They have a family history of dyslexia.
2. Adult having history of above problem during their school time.
3. They faced difficulty while reading.
4. For reading child take long time.
5. Usually, they read same sentence repeatedly for many times.
6. Generally they miss off the end of words.
7. Dyslexic people miss out the words.
8. Some are read appropriately but failed to understand what they are reading.
9. When writing adult may show some symptoms like-
  - While taking notes they find difficulty.
  - Start anything is challenge for them.
  - Punctuation cause big problem to them.
  - They are unable to write correct spelling.
  - With spelling they always face good days and bad days.
  - Gradually they facing problem or they may miss the word's ending letter.
  - They generally reverse letters or leave them out.
  - At office level they have problem with form filling and timesheet, etc.
  - Dictionary reading and telephone directory is become hard for them..
  - Problems recalling the months of the year forwards and backwards.
  - Map reading problem.

- Direction problem they have.
- Problems with left/right
- And sometime difficulty with telling the time.
- Problems regarding time management and getting to appointments on time
- They have difficulties with mental arithmetic.
- Facing difficulties in repeating numbers backwards, i.e. B63, 368.
- Mix up numbers, i.e. 13 and 31.
- They produce 'messy' work.

### **Aim and Objective**

1. To conceptualize the role of Medhya Rasayan in Dyslexia.
2. To show the different treatment route in Dyslexia.

### **Material and Method:**

It is purely a literary study for that classical text, scientific articles and modern text were searched and referred for the articles.

### **Observation:**

Dyslexia the learning disabilities are the neurobiological in cause. This significance that the cause is discovered in the human brain. The brain is mainly made up of the two types of material i.e, gray matter and white matter. Normally Gray matter is found when we gaze at a brain and white matter is organized in the brain's deeper part. Gray matter is made up of the nerve cells and helps at primary level for processing information. While white matter is made up of connective fibers. White matter overlaps with myelin. That helps to enable the communication among nerves as well as it is chiefly responsible for transmission around the brain.

According to some research article it is clear that medhyarasayan shows good effect on the Neurobiological factor.<sup>[6]</sup> as well as it shows that medhyarasayan had the best outcome over the cognitive defect<sup>[7]</sup>

The Ayurvedic drugs consider as mental enhancer Guduchi (*Tinosporacordifolia*), Mandukaparni (*Centellaasiatica*), Yashtimadhu (*Glycyrrhizaglabra*) and Shankhapushpi (*Convolvulus pluricaulis*)<sup>[8]</sup>. Along with the drugs some combination and preparations are effective like Brahmi Ghrita,<sup>[9]</sup> GuduchyadiRasayana.<sup>[10]</sup> AshtaMangalGhrita<sup>[11]</sup> VachadiGhrita<sup>[12]</sup> AshtangaGhrita<sup>[13]</sup>. We can think about drugs and the preparation when we think about the management of dyslexic child.

Some evidence explained that these Drugs and the medhyarasayana drugs are very beneficial in psychosomatic and neurobiological defects<sup>[14]</sup> likes,

1. Brahmi (*Bacopamonniera*) used to enhances learning and improve memory <sup>[15]</sup> in addition it has the potentiality to show the progress in other cognitive deficits and behavioral problems. <sup>[16]</sup> Some study concluded that brahmi significantly improve the reaction time (Auditory and visual)<sup>[17]</sup>. As well as improve the acquisition of the learning task.<sup>[18]</sup> it also helps in increasing the rate of the newly acquired knowledge.<sup>[19]</sup>
2. Ashwagandha (*withaniasomenifera*) drug root powder is every helpful in enhance memory along with cognitive functions
3. Madhuyashti (*Glycyrrhizaglabra*) drug is also useful in the enhancing the memory and learning abilities.
4. Jyotismati (*Celastruspaniculatus*) is a nootropic drug with no side effect.
5. Guduchi (*Tinosporacordifolia*) is having the acquisition effect.
6. Mandukaparni (*Centellaasiatica*)drug consumption enhance the learning and memory retention ability at neural level. Along with that it helps in the mending the damage neuron. And most important its aqueous extract helps in preventing as well as managing the cognitive defect.
7. Shankhpushpi (*Convolvulus pluricaulis*)is having preferentially effect on enhancing the cognition by increasing the protein contains of the brain.

#### **Conclusion:**

Dyslexia is a cognitive disorder, which affect the future goals of the children and hampered the children's ability to growth through later stage of development. The above given evidence shows that the Ayurvedic drugs (medhyarasayan or memory enhancer) and preparation directly or indirectly improve the intellect and cognitive power. This is earlier explained by Ayurvedic compendium under the beauty of medhyarasayan. Brhmi, Mandukaparni, Jyotishmati, Shankhpushpi, Yashtimadhuetc help in improvement and prevention of the dyslexia that is learning disability. As they show significant result in sensory and motor function as well as Neurobiological and Neurosomatic condition.

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#### **Conflict of interest:**

None

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