

Specific Learning Disorder: An Overview and Its Homoeopathic Approach

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ABSTRACT

As this is an era where we cannot survive without basic education, specific learning disorder limits a child from achieving his/her academic excellence. Dyslexia, Dysgraphia, and Dyscalculia come under Specific disorders in scholastic skills. It is rare to see these disorders in isolation. Various subtypes for each of the scholastic skills are mentioned by researchers and textbooks.

Homoeopathy treats on a holistic principle by individualizing every patient as a person. It has good scope for Learning disorders which is proved by various research. Some of the effective remedies are Lycopodium, Calcarea Carb, Phosphorus, Baryta Carb, Aethusa, etc.

Keywords: Learning Disorder, Learning Disability, Dyslexia, Dysgraphia, Dyscalculia, And Homoeopathy

INTRODUCTION

According to the guidelines prepared by the Indian Psychiatry Society learning difficulty is where the child has only *mild difficulty* in scholastic skills, whereas in Learning Disorder the child has *substantial difficulty*, and learning Disability is characterized by *persistent difficulties and inability* in learning to read, write and do arithmetic, which will be evident on standardized testing. ⁽¹⁾ They are identified when a person's capacity to receive effectively and efficiently or process information is

specifically impaired. ^(2,3) Learning Disability is a limitation in the ability to perform an activity that is seen as typical for a human being at the relevant stage of development. ^(4,5,6)

DISTINCTION BETWEEN THE TERMINOLOGIES- DISORDER & DISABILITY

The term "Learning disability" has come into usage after 1963 from the remarks given by Samuel A Kirk to the parents of children with learning problems in Chicago. ⁽⁷⁾ Most academicians and medical professionals refer to "Learning Disorders" as "Learning Disability" (LD) even though they both differ in a unique way. When it comes to "Learning Disorders", these are the conditions that have a better prognosis and fair outcome if they are identified in the early stages and managed properly with remedial education and proper treatment where as "Learning Disabilities" (LD) are those conditions which are usually comorbid with other congenital disorders and has poor prognosis even after following all the management protocols. Both DSM and ICD use "disorder" as a medical term for diagnosis.

The word "disability" is a legal term used to receive special disability certificates and services under the Government of India's act – "Rights of Persons with Disabilities Act" (RPWD Act) 2016, "Learning

disability” (LD) is an official clinical diagnosis when the child meets certain criteria assessed by a professional usually a psychologist using NIMHANS battery for Specific learning disability with impairment more than 40 percent. ⁽⁸⁻¹¹⁾

Prevalence: The complicated heterogeneous linguistic sociocultural environment in India, where children frequently learn to study in a language different than their mother tongue, renders it challenging to estimate the prevalence and make a diagnosis. ⁽¹²⁾ Even though various research shows different prevalences an average of 6.6% to 19% of children with a learning disability can be found in South India and 1.58% to 12.8% in north India. ⁽¹³⁾

Demographic Factors

Age

Mostly learning disorders remain invisible until they are identified at school. 7.5% of children, belonging to the age group of 5 to 7 years are at risk of developing SLD. ⁽¹³⁾

Gender

Most clinicians and researchers have observed the incidence of these disorders is more in boys than girls. ⁽¹²⁻¹⁴⁾

Socio-economic status

According to researchers, it was found that poverty places a role in the development of learning disorders. When compared with the upper socio-economic class, lower socio-economic class children are prone to learning disorders. Similarly, it was seen that government school children are at more risk. ⁽¹³⁾

Learning disorders and their subtypes

Developmental Dyslexia and subtypes

In this disorder, the child may have a considerable number of difficulties in the area of reading. It is characterized by difficulty in reading, recognizing words, and comprehending the matter. Have poor phonological awareness, dyslexic individuals have difficulties in performing

tasks such as syllable counting, phoneme deletion or substitution, etc. ⁽¹⁵⁾

Subtypes

- *Phonological Dyslexia:* Difficulty in making the sounds properly
- *Visual Dyslexia:* Reading and writing are the issues as the words seem to be floating when they try to read and write
- *Double Deficit Dyslexia:* A combination of phonological and rapid naming.
- *Surface Dyslexia:* Unable to name the letters of numbers in rapid time
- *Rapid Naming:* Cannot recognize the whole words. ⁽¹⁶⁾

Developmental Dysgraphia and subtypes

Deficits in written expression significantly below the expected level for a child’s age and education. It includes poor handwriting, poor spatial sense, spelling mistakes while writing, poor paragraph organization, errors in grammar and punctuation, etc.

Subtypes

- *Surface dysgraphia:* Impaired spelling of irregular words relative to regular words; Relatively spared non-word spelling.
- *Phonological dysgraphia:* Impaired non-word spelling; Relatively spared word spelling
- *Deep dysgraphia:* Impaired picture naming, writing to dictation with semantic errors; Poor non-word spelling
- *Graphemic Output Buffer dysgraphia:* Word and non-word spelling both impaired with similar error types; Effect of length on spelling accuracy. Error types are letter substitutions, deletions, additions, and transpositions. ⁽¹⁷⁾

Developmental Dyscalculia and subtypes

Specific impairment of mathematical skills. Lack of recall, and application of numerical arithmetical knowledge, including numerospatial conceptualization and both factual and procedural arithmetical knowledge, wrong or inappropriate application of calculating strategies, and difficulty

generalizing learned content are some of the symptoms.

Subtypes

- *Verbal Dyscalculia*: problem in naming the number of things
- *Practognostic Dyscalculia*: problem in manipulating things mathematically, pictured, or real E.g.: comparing things (< or >)
- *Lexical Dyscalculia*: problem in reading mathematical symbols, including operation signs (+, -) and numerals
- *Graphical Dyscalculia*: problem writing mathematical symbols and numerals
- *Ideognostic Dyscalculia*: problem in understanding mathematical concepts and relationships and performing mental calculations.
- *Operational Dyscalculia*: problem in performing arithmetic operations. ⁽¹⁸⁾

Sl. no	Dyslexia	Dysgraphia	Dyscalculia
1	Phonological Dyslexia	Surface dysgraphia	Verbal Dyscalculia
2	Visual Dyslexia	Phonological dysgraphia	Practognostic Dyscalculia
3	Rapid Naming Dyslexia	Deep dysgraphia	Lexical Dyscalculia
4	Double Deficit	Graphemic Output Buffer dysgraphia	Graphical Dyscalculia
5	Surface Dyslexia		Ideognostic Dyscalculia
6			Operational Dyscalculia

Table 1: Learning disorders and their subtypes.

CLASSIFICATION

DSM III R	Axis II	Specific developmental disorder
DSM IV	Axis I	Learning Disorders Reading disorders Mathematics disorder Disorders of written expression 315.9 Learning Disorder Not Otherwise Specified
DSM V	Axis I	Under Neurodevelopmental disorder Specific Learning Disorder Specify if: 315.00 With impairment in reading (specify if with word reading accuracy, reading rate or fluency, reading comprehension) 315.2 With impairment in written expression (specify if with spelling accuracy, grammar and punctuation accuracy, clarity, or organization of written expression) 315.1 With impairment in mathematics (specify if with number sense, memorization of arithmetic facts, accurate or fluent calculation, accurate math reasoning) Specify current severity: Mild, Moderate, Severe
ICD 10		F81. Specific development disorder of scholastic skills: F81.0 Specific reading disorder F81.1 Specific spelling disorder F81.2 Specific arthematic disorder F81.3 Mixed disorder of scholastic skills F81.8 Other developmental disorders of scholastic skills F81.9 Developmental disorder of scholastic skills, unspecified ⁽⁶⁾
ICD-11		6A03 Developmental learning disorder 6A03.0 Developmental learning disorder with impairment in reading 6A03.1 Developmental learning disorder with written expression 6A03.2 Developmental learning disorder with mathematics 6A03.3 Developmental learning disorder with other specified impairments of learning 6A03.Z Developmental learning disorder, unspecified

Table 2: Classification of learning disorders

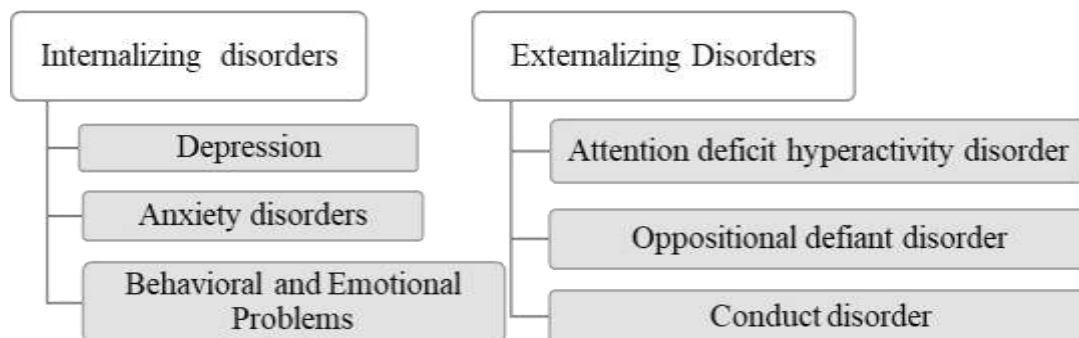
ACCORDING TO DSM-5 DIAGNOSIS OF LEARNING DISORDERS INCLUDES THE FOLLOWING SYMPTOMS

1. Persistent difficulties in reading, writing, and arthematic/ mathematical reasoning skills begin during formal years of school. They are seen as:
 - i. Inaccurate or slow and effortful reading
 - ii. Poor written expression that lacks clarity
 - iii. Difficulties in remembering number facts.
 - iv. Inaccurate mathematical reasoning
2. The defined academic competence must be significantly impaired, and this impairment cannot be the result of

sensory/motor impairments, mental disabilities, low intelligence quotient, inadequate instruction, a lack of stimulation, or any other such

exogenous factors. They should significantly interfere with academic achievement, occupational performance, or activities of daily living. ^(5,19)

COMORBIDITIES ⁽¹²⁾



TOOLS FOR ASSESSMENT OF LEARNING DISABILITY IN INDIA

- DST (dyslexia screening test)
- DTLTD (Diagnostic test of learning disabilities)
- Behavioural checklist for screening the learning disabled.
- Grade-level assessment device for children with learning problems (GLAD) in primary schools
- Arithmetic diagnostic test for primary school children
- NIMHANS battery diagnostic tool is recommended by the government. ⁽²⁰⁾

ROLE OF HOMEOPATHY IN LEARNING DISORDERS

While there is a solution for learning disorders, it causes more of a holistic approach in its management. The negative consequences can be mitigated with early action. Homeopathic medicines can enhance brain functioning and help connect the child to their environment. When combined with special education or speech, language, and counselling for children, the integrative approach can make a significant difference in the child's development. Slow learners tend to have short attention spans, which homeopathic medications can aid to lengthen, leading to an improvement in the child's focus. Also, the emotional state will

improve. Learning becomes less frustrating for the youngster as a result, and learning becomes easier for them over time.

To see the initial positive changes with homeopathy, it takes at least 8 to 10 weeks and then the improvement continues and builds over time.

According to the symptoms of learning disorder, few rubrics and homeopathic medicines are mentioned below. ⁽²¹⁾

RUBRICS ACCORDING TO BTPB

- Intellect- comprehension difficult
- Intellect- confusion
- Intellect-impaired ⁽²²⁾

RUBRICS ACCORDING TO BBCR

- Mind- comprehension difficult
- Mind- concentration difficult
- Mind- learns with difficulty.
- Mind- confused.
- Mind- mistakes- differentiating objects in
- Mind- mistakes- speech, writing.
- Mind- mistakes- words in, use off
- Mind- perplexity
- Mind- dullness, mental, obtuseness ⁽²³⁾

RUBRICS ACCORDING TO KENT

- Mind- answers- incoherently
- Mind- answers- incorrectly

- Mind- answers- irrelevantly
 - Mind- answers- monosyllable
 - Mind- speech- confused
 - Mind-reading- aversion to
 - Mind- dullness, difficulty to think
 - Mind-writing- aversion to
 - Mind-writing- inability to
- Mind-writing- disconnected ⁽²⁴⁾

RUBRICS ACCORDING TO ROBIN MURPHY

- Mind- mistake- generals, calculating in
- Mind- mistake- generals, differentiating of objects in
- Mind- mistake- reading in
- Mind- mistake- speaking in
- Mind- mistake- writing in
- Mind- mathematics general
- Mind- dyslexia- reading in
- Mind- dyslexia- understanding in
- Mind- dyslexia- speaking in ⁽²⁵⁾

RUBRICS ACCORDING TO WILLIAM BOERICKE

- Mind- comprehension-difficulty
- Mind- confusion, dullness
- Memory- omits letters, words
- Memory- thoughts slow
- Memory- thoughts vanish while reading, talking, writing ⁽²⁶⁾

HOMEOPATHIC REMEDIES

1. Calcarea carb-
Children of the fat, the flabby type who grow rapidly, have profuse sweat on head and are large headed. Sluggish children with a lot of apprehension and fear. They are often forgetful, confused, and low-spirited. They are slow learners and tend to misplace words. ^(26-29, 30)
2. Lycopodium-
Suited for low self-confidence children who are extremely sensitive. Children have a weak memory, and confused thoughts. They cannot read what he writes. Often make mistakes in spelling or writing wrong words and syllables. ⁽²⁷⁾
3. Phosphoric acidum-

The child has mental debility and then physical debility. They often become blank, and cannot collect their thoughts, or find the written word, difficult comprehension. ⁽²⁶⁾

4. Helleborus- is another effective remedy for learning disabilities with weak memory. The child feels difficulty remembering things. The child is slow in answering. He/she is unable to think, slow in perception, and inattentive. ^(26, 27, 29, 31)
 5. Baryta carb-
It is an excellent remedy for learning disorders in children, especially dwarfish children. The child is inattentive, never concentrates on lessons, and appears to learn something today but completely forgets tomorrow. The child has a loss of memory, mental weakness, loss of confidence, and confusion. ^(26, 27,30)
- The above-given remedies are only for reference purposes.
 - Homeopathic remedies should be prescribed only on individualization as every individual is different.

Declaration by Authors

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