PERSPECTIVE

Specific Learning Disabilities in India: Current Situation and the Path Ahead

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Students with specific learning disabilities (SpLD) need timely remedial education and provisions to continue their education within the main-stream. The Government of India has enacted the Rights of Persons with Disabilities (RPwD) Act, 2016, and legitimized SpLD as a disability, nationally. This Act mandates screening of every school student for SpLD on completion of eight years of age, setting up of resource rooms for imparting remedial education in all schools, and provisions in examinations for all afflicted students. This Act authorizes that students with SpLD get benefit of reservations in higher education seats and government jobs. To ensure that this Act is implemented effectively, all stakeholders in the field of education and health will have to collaborate to set up sufficient number of assessment clinics, create sufficient number of special educators, and develop validated screening and assessment tools for diagnosing SpLD in all the regional languages of our country.

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pecific learning disabilities (SpLD) are a group of neurodevelopmental disorders characterized by severe and persistent difficulties in learning to efficiently read (dyslexia), write (dysgraphia) and/or perform mathematical calculations (dyscalculia); despite normal intelligence, conventional schooling, intact hearing and vision, adequate motivation and socio-cultural opportunity [1,2]. Students with SpLD present with one or more of academic problems like reading slowly and incorrectly, skipping lines while reading aloud, making repeated spelling mistakes, untidy/illegible handwriting with poor sequencing, and inability to perform even simple mathematics [2,3]. These afflicted students have poor school performance [3], anxiety [4], and social maladaptation [5]. If SpLD remains undiagnosed, they invariably fail to achieve school grades at a level that is matching with their intellectual abilities [3]. In our country, up to 5-15% school-going children (almost 35 million), who otherwise have no visible physical, intellectual, visual, or auditory impairment, have this invisible disability [3,6]. Dyslexia afflicts 80% of all school students identified as having SpLD [3]. Additionally, out of 35 lakh children who are not in the formal school system [7], quite a few may be having a SpLD; though, no data is available.

SpLD is believed to be a result of functional disruption in neural systems, rather than an anatomic problem, and is genetically inherited [2,3]. Ideally, SpLD should be diagnosed while the afflicted student is in primary school, so that there is adequate time to avail adequate remedial edu-

cation for a few years to achieve academic competence [3].

Landmark Events

Let us recapitulate a brief history of the landmark events related to SpLD in our country so as to be able to understand its present status and plan for the future (Table I). The state government of Maharashtra was the first to recognize SpLD as a disability; and passed a Government Resolution in 1996 empowering school students with SpLD in standards IX and X the option of availing provisions (accommodations) during their schooling and even for the Secondary School Certificate (SSC) board examinations. These accommodations included: i) extra time of 30 minutes for all written tests with spelling mistakes being overlooked; ii) employing a writer for children with dysgraphia; iii) exemption of a second language (Hindi or Marathi in an English medium school) and substituting it with a work experience subject; and iv) exemption of standard X mathematics (algebra and geometry) and substituting it with lower grade of mathematics (standard VII) and another work experience subject [3].

Over the years, other state governments have also granted provisions to students with SpLD so that they could successfully complete their education in mainstream schools (inclusive education). The critically acclaimed Hindi movie, *Taare Zameen Par* (Stars on Earth), accurately depicted the academic and social problems faced by a young 8-year-old boy with undiagnosed

Table I Landmarks Events Related to Specific Learning Disabilities in India [3,10-12]

Event	Year
Provisions given to SpLD students in standards IX-X in Maharashtra	1996
ICSE and CBSE national educational boards allow SpLD students to avail provisions	1999
Provisions given to SpLD students from class standards I-XII in Maharashtra	2000
GoI launches Sarva Shiksha Abhiyan ('Education for All' movement) ^a	2001
Provisions given to SpLD students in college courses in Maharashtra state	2003
Reservations for SpLD college students in disability category in Maharashtra state	2003
Provisions given by other states (Karnataka, Tamil Nadu, Kerala, Gujarat, Goa, others)	2003 to 2015
Hon. Bombay High Court verdict: denying provisions make school/college authorities liable for prosecution	2006
GoI implements Right of Children to Free and Compulsory Education (RTE) Act, 2009	2010
GOI implements Rights of Persons with Disabilities (RPwD) Act, 2016	2016

SpLD: specific learning disabilities; ICSE: Indian Certificate of Secondary Education; CBSE: Central Board of Secondary Education; GoI: Government of India; ^aIncorporated into Samagra Shiksha (Holistic Education) in 2018.

dyslexia [8,9]. This movie played a vital role in increasing awareness about dyslexia in India [8,9]. The launch of the Sarva Shiksha Abhiyan (Education for All movement), and implementation of the Right of Children to Free and Compulsory Education (RTE) Act (2009) have mandated that all children in the 6 to 14 years age group, including children with disabilities, have access to free and compulsory education [10,11]. A recent landmark event is the Government of India's (GoI's) implementation of the Rights of Persons with Disabilities (RPwD) Act, 2016 [12] which, for the first time, has recognized SpLD as a disability at the national level. With the backing of this Act, Indian students with SpLD all over the country can look forward to a brighter future.

The RPwD Act, 2016 and SpLD

The RPwD Act, 2016 [12] empowers students with SpLD all over the country. The salient features of this pathbreaking legislation mandate that these students: should not face any discrimination; should continue education in mainstream schools/colleges (inclusive education); get access to occupational therapy and remedial education; get reservations in higher educational seats and government jobs; and get access to vocational training for self-employment.

The RPwD Act, 2016 [12] has also stated that: *i*) SpLD should be detected at the earliest and regular 1-yearly screening carried out; *ii*) adequate number of resource centers to support school education at all levels be established; *iii*) adequate number of training institutions to create special educators or remedial teachers be established; *iv*) induct SpLD as a component for all education courses for schools, colleges and university teachers, doctors, para-medical personnel, social welfare

and rural development officers, Accredited Social Health Activist (ASHA) and Anganwadi workers; and ν) all universities should promote research in SpLD.

A subsequent GoI notification [13] has stated that teachers, in both public and private schools, should screen every student in standard III (8-year-olds) and refer those who test positive to a learning disability clinic for further evaluation [13]. This screening can be done for students studying in English-medium schools by using a validated Screening Check list for Specific Learning Disability [3], which has been devised by the Maharashtra State Council of Educational Research and Training's, Divisional Office and Institute of Vocational Guidance and Selection, Mumbai [3].

A study from Mumbai [5] has reported that newlydiagnosed students with SpLD [mean (SD) age 12.5 (2.2) years (range 8.0 - 16.0 years)] perceive themselves as: i) being "socially excluded," viz., they feel different from their peers, are lonely, feel stigmatized by their teachers and peers, have problems concentrating at school and feel left out; ii) having developed "emotional reactions," viz., worries, concerns, anger, and problems; iii) being "physically limited" in performing physical activities, having a poor health status, and have difficulties with sleeping; iv) lacking "independence," viz., they are insecure about their future and unable to live an autonomous life; and v) lacking in qualities for "social inclusiveness," viz., they feel that their peers and friends do not enjoy their company or understand their problems or care about their condition, and they therefore find it difficult to develop social relationships. A large majority (75%) of mothers of school students with SpLD already develop mild anxiety levels by the time this disability is diagnosed in their child [mean (SD) age 12.0 (2.32) year (range 7-16 year)] [14].

Unique Disability Identity Card

The GoI has implemented the 'Unique ID for Persons with Disabilities (UDID)' project [15] in 2018 with the objectives of creating a national database for persons with disabilities. A school student with suspected SpLD has to apply online (<https://www.swavlambancard.gov.in/pwd/ application>) to get an appointment from the nearest recognized center for assessment. On confirmation of the diagnosis of SpLD the student will receive the disability certificate and UDID card [15]. This card will mention the student's name, date of birth, unique ID number, percentage of the disability and enable the student to avail provisions in school and board examinations. It is important to remember that a primary school student (older than 8 years) who is diagnosed with SpLD will have to undergo revaluation first at the age of 14 years; and again, at the age of 18 years [13]. Only a UDID card issued after evaluation on completion of 18 years of age states that the disability is permanent and entitles the student to get reservation in higher educational seats and government jobs [15].

Diagnosis of SpLD in India

The RPwD Act, 2016 guidelines for diagnosing SpLD [12] follow the twenty-year old DSM-IV-R criteria [1] for diagnosing this disability in our country. This involves directly, without any prior remedial education, doing educational testing to document that the student has significant difficulties in reading (dyslexia), writing (dysgraphia) and/or performing mathematical calculations (dyscalculia) [1,16]. Lately, many Western countries have adopted the latest DSM-5 [17] criteria for diagnosing SpLD, which states that the educational testing to diagnose SpLD should be done only after the school student has been given the necessary provisions and after having attended regular 'one-hourly' remedial education sessions with a special educator, twice- or thrice-weekly, for a minimum period of six months [17]. The application of the DSM-5 criteria is not suitable in the Indian educational setting as there is a dearth of qualified special educators; and, most schools do not have infrastructure for providing remedial education [3].

The only test that has been recommended by the GoI to diagnose SpLD [18] is the National Institute of Mental Health and Neurosciences (NIMHANS) Battery [19], which is available in English, Hindi and Kannada. However, the NIMHANS battery can only be utilized to diagnose SpLD in school students who are 8 to 12 years of age [19]. Other validated tests which are available in India, but not mentioned in the GoI's protocol [18], include: *i*) the Grade Level Assessment Device (GLAD) [20] (available in English and Hindi), which can be used to

diagnose SpLD in students up to class standard IV level; *ii*) the Dyslexia Assessment for Languages in India (DALI) [21] test (available in English, Hindi, Kannada and Marathi), which can be used to diagnose dyslexia in students up to standard V level; and *iii*) Sholapurwala RF's Curriculum Based Test for Educational Evaluation of Learning Disability [22] (available in English and Marathi), which can be used to diagnose SpLD in students up to standard X.

It is not possible to quantify the severity of SpLD by following the DSM-IV-R criteria for diagnosing SpLD [1]. As per GoI rules [12], unless the severity of a disability is ≥40 per cent (benchmark disability), an afflicted student cannot qualify to avail any benefits. To solve this dilemma, the GoI has stated that "any student who tests positive on NIMHANS Battery shall be considered as having SpLD disability of more than 40%" [18].

Existing Challenges in India

Currently there are significant challenges to overcome in order to ensure effective implementation of the RPwDAct, 2016 [3]. Validated screening tools to identify a student who needs to be referred for assessment; and validated assessment tools for diagnosing SpLD are not available in all the regional languages of our country [3]. There is a dearth of assessment clinics and special educators to diagnose SpLD and impart remedial education to afflicted students [3,23]. Also, a large majority of schools do not have resource rooms to impart remedial education [3].

The RTE Act, 2009 [11] has mandated that no student shall be held back until completion of schooling till standard VIII. One of the consequences of this is that students with suspected SpLD are getting referred for assessment at a very late age [4], when they are in standard IX (14 years of age). At this stage, only the Sholapurwala RF's test [22] or the Woodcock-Johnson Test of Achievement [24] (in English) can be used to diagnose SpLD. It is important to note that the Woodcock-Johnson Test of Achievement is not validated for use in the Indian population [24,25].

The Path Ahead

To make India an SpLD-friendly country, active collaboration between all stakeholders in the field of education and healthcare is needed. The action points to achieve this include: *i*) school trustees and principals should set up resource rooms within the school to ensure that students with SpLD get the remedial education at an affordable cost; *ii*) all students at the age of 8 years should be screened for SpLD and those who test positive should be referred to the nearest assessment clinic for evaluation; *iii*) school counselors should play a proactive role to

ensure that students with SpLD do not feel stigmatized; *iv*) government medical colleges and hospitals (including those at district levels) should set up assessment clinics; and, *v*) all universities related to the field of teacher education should start courses to create special educators, and conduct research to develop validated screening and assessment tools for SpLD in all the 22 regional languages of our country.

Over the years, SpLD in our country will get detected early, there would be adequate qualified special educators available, and the afflicted students will be able to avail timely remedial education to achieve academic competence [3]. The path ahead is arduous but is achievable in the next decade with determined efforts from all stakeholders.

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REFERENCES

- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 4th ed. Revised. American Psychiatric Association: 2000.
- Peterson RL, Pennington BF. Developmental dyslexia. Annu Rev Clin Psychol. 2015;11:283-307.
- 3. Karande S, Sholapurwala R, Kulkarni M. Managing specific learning disability in schools in India. Indian Pediatr. 2011;48:515-20.
- Thakkar AN, Karande S, Bala N, et al. Is anxiety more common in school students with newly diagnosed specific learning disabilities? A cross-sectional questionnaire based-study in Mumbai, Maharashtra, India. J Postgrad Med. 2016;62:12-9.
- Karande S, Venkataraman R. Self-perceived health-related quality of life of Indian children with specific learning disability. J Postgrad Med. 2012;58:246-54
- Arora NK, Nair MKC, Gulati S, et al. Neurodevelopmental disorders in children aged 2-9 years: Population-based burden estimates across five regions in India. PLoS Med. 2018;15:e1002615.
- Vishnoi A. Over 35 lakh children out of school, states tell Centre. The Economic Times, 2021 Oct 10; New Delhi. Accessed February 11, 2022. Available from: https://economictimes.indiatimes.com/news/ india/over-35-lakh-children-out-of-school-states-tell-centre/ articleshow/86920024.cms
- 8. Sathyanarayana Rao TS, Krishna VS. Wake up call from 'Stars on the ground.' Indian J Psychiatry. 2008;50:2-4.
- Chakravarty A. Taare zameen par and dyslexic savants. Ann Indian Acad Neurol. 2009;12:99-103.
- Department of School Education and Literacy, Ministry of Education, Government of India. Samagra Shiksha ("Holistic Education"). Accessed November 21, 2021. Available from: https://samagra.education.gov.in/
- 11. Legislative Department. Ministry of Law and Justice,

- Government of India. The Right of Children to Free and Compulsory Education Act, 2009. Accessed November 21, 2021. Available from: https://legislative.gov.in/actsofparliament fromtheyear/right-children-free-and-compulsory-education-act-2009
- Legislative Department. Ministry of Law and Justice, Government of India. The Rights of Persons with Disabilities Act, 2016. Accessed November 21, 2021. Available from: https://legislative.gov.in/ actsofparliamentfromtheyear/rights-persons-disabilities-act-2016
- 13. Department of Empowerment of Persons with Disabilities (Divyangjan). Ministry of Social Justice and Empowerment, Government of India. Notification on Guidelines for Assessment of Various Specified Disabilities. Accessed November 21, 2021. Available from: https://disabilityaffairs.gov.in/content/page/guidelines.php
- Karande S, Kumbhare N, Kulkarni M, Shah N. Anxiety levels in mothers of children with specific learning disability. J Postgrad Med. 2009;55:165-70.
- 15. Department of Empowerment of Persons with Disabilities (*Divyangjan*). Ministry of Social Justice and Empowerment, Government of India. Unique Disability ID. Accessed November 21, 2021. Available from: https://disabilityaffairs.gov.in/content/page/unique-disability-id.php
- Karande S, Kulkarni M. Specific learning disability: The invisible handicap. Indian Pediatr. 2005;42:315-9.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. American Psychiatric Association Publishing; 2013.
- 18. Department of Empowerment of Persons with Disabilities (*Divyangjan*). Ministry of Social Justice and Empowerment, Government of India. Assessment guidelines for disability has been amended with regard to specific learning disability on 9.12.2000. Accessed November 21, 2021. Available from: https://disabilityaffairs.gov.in/content/page/guidelines.php
- Hirisave U, Oommen A, Kapur M. Psychological assessment of children in the clinical setting. NIMHANS index of specific learning disabilities. 2nd ed. Samudra Offset Printers; 2006.
- Narayan J. Grade level assessment device for children with learning problems in schools. Secunderabad: National Institute for The Empowerment of Persons with Intellectual Disabilities (*Divyangjan*); 2003 reprint. Accessed November 21, 2021. Available from: https://niepid.nic.in/list.php
- National Brain Research Centre. DALI Dyslexia Assessment for Languages of India. National Brain Research Centre; 2015.
- Sholapurwala RF. Curriculum Based Test for Educational Evaluation of Learning Disability. 2nd ed. Jenaz Printers; 2019.
- Does India have enough special teachers Supreme Court asks. India Today 2021 Oct 29; New Delhi. Accessed January 16, 2022. Available from: https://www.indiatoday.in/education-today/news/ story/does-india-have-enough-special-teachers-supreme-courtasks-1870970-2021-10-29
- Woodcock RW, McGrew KS, Mather N. Woodcock-Johnson Tests of Achievement. 3rd ed. 2001.
- Abu-Hamour B, Al Hmouz H, Mattar J, Muhaidat M. The use of Woodcock-Johnson tests for identifying students with special needs - a comprehensive literature review. Procedia Soc Behav Sci. 2012; 47:665-73.

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