

A Study on Learning Disabilities among Secondary School Pupils in Nashik District, Maharashtra

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ABSTRACT

This study aims to examine the prevalence of learning disabilities dyscalculia, dysgraphia, and dyslexia among secondary school students in Nashik District, Maharashtra. A sample of 100 ninth-grade students from various private schools across urban and rural settings was selected using random sampling. The primary objective was to identify the gender-based differences in the manifestation of these disabilities. The Learning Disability Battery by Bhargava & Bhardwaj was used as the research tool, with a self-administered questionnaire focusing on the three key learning disabilities. Statistical analysis was conducted using t-tests to assess the significance of differences between male and female students. The results revealed significant gender-based disparities. Male students exhibited higher mean scores in all three disabilities, particularly in dyscalculia ($t = 5.10, p < 0.01$) and dyslexia ($t = 5.89, p < 0.01$), indicating a higher prevalence and severity of these conditions. While dysgraphia also showed a significant difference ($t = 3.53, p < 0.01$), the effect size was smaller. These findings emphasize the need for gender-sensitive approaches to identifying and addressing learning disabilities. Recommendations include implementing tailored instructional strategies, utilizing diverse learning aids, and fostering awareness among teachers and parents.

Keywords: Learning Disabilities, Dyscalculia, Dysgraphia, Dyslexia, Gender Differences, Secondary School Students, Educational Interventions, Nashik District

A learning disability is a term used to describe a variety of challenges that affect how individuals learn specific skills. These challenges can impact areas such as reading, writing, mathematics, speaking, listening, and reasoning. The nature and severity of these difficulties can vary widely from one person to another, meaning each individual may face different challenges. Research indicates that learning disabilities are often linked to differences in the brain's ability to process and interpret information, which can make certain tasks more difficult for the affected individual.

While there are no obvious physical signs that someone has a learning disability, experts note a significant discrepancy between a child's academic performance and their actual potential based on intelligence or aptitude. For instance, a child might struggle in school even though

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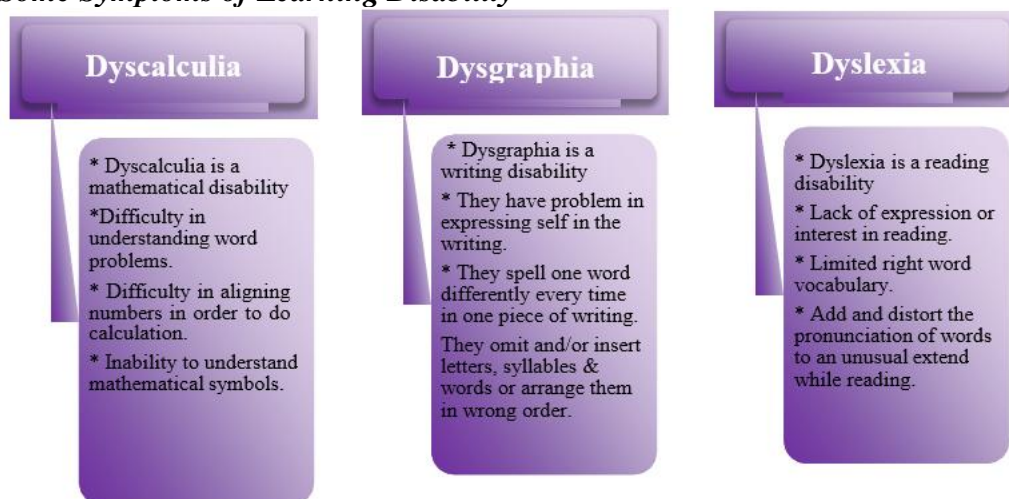
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their intellectual abilities suggest they should perform better. In some cases, these academic struggles may indicate a learning difficulty, and teachers or parents may notice certain behaviors that signal such challenges.

Learning disabilities are often first noticed during early education, especially when a child faces difficulties with core school tasks. However, it is important to note that a child might not exhibit all or even most of the common signs of a learning disability. When certain skills such as reading, writing, listening, speaking, or mathematics seem particularly challenging for a child, it is essential for educators and parents to assess the situation further. Evaluating these difficulties through appropriate testing can help determine if a learning disability is present.

Some Symptoms of Learning Disability



Learning disabilities (LDs) refer to a range of cognitive impairments that affect an individual's ability to process information, leading to difficulties in specific areas of learning such as reading, writing, mathematics, and problem-solving. These disabilities are not reflective of intelligence but rather indicate challenges in how information is received, processed, and applied. The study of learning disabilities is crucial for understanding the barriers that children and adolescents face in their educational journey. In secondary schools, where academic expectations increase significantly, the challenges posed by LDs become more prominent, affecting both academic performance and social development (Fletcher, Lyon, Fuchs, & Barnes, 2007). This is particularly important in regions like Nashik District in Maharashtra, where the prevalence and recognition of learning disabilities may be less understood due to a lack of comprehensive research and support systems (Sundar, 2013).

Learning disabilities are often undiagnosed or misdiagnosed, leading to delayed intervention and additional struggles for affected students. These disabilities can manifest in various ways, such as dyslexia, dyscalculia, and attention-deficit hyperactivity disorder (ADHD), each requiring specific teaching strategies for effective learning. According to the National Dissemination Center for Children with Disabilities (NICHCY, 2012), early identification and tailored interventions are essential to ensuring that students with LDs receive the necessary support to succeed academically. However, in many developing regions, including parts of Maharashtra, there is still a gap in educational policies and practices that adequately address the needs of students with LDs.

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Teachers often rely on traditional methods of instruction, which may not be effective for students with LDs. The absence of proper teacher training in recognizing and addressing learning disabilities contributes to a cycle of academic failure and social exclusion (Kumar & Jain, 2015). It is essential to bridge this gap through proper research, teacher training, and community awareness programs to ensure that all students, regardless of their learning challenges, have equal opportunities for success.

The role of socio-economic factors in the prevalence and identification of learning disabilities cannot be overlooked. In rural and semi-urban regions like Nashik, socio-economic status often influences the availability of resources, and families may lack the knowledge or financial means to seek professional help for their children's learning difficulties. Furthermore, the stigma associated with learning disabilities in many parts of India can discourage families from seeking formal assessments or interventions (Kaur, 2011). This social stigma, coupled with a lack of support structures, further marginalizes students with learning disabilities and hinders their educational progress. By focusing on the unique challenges faced by students in this region, the research aims to provide insights into how these challenges can be addressed through improved educational policies, teacher training, and community involvement. Additionally, the study will examine the role of family and community support in the academic achievement of students with LDs, shedding light on the importance of a holistic approach to addressing learning difficulties (Sharma & Yadav, 2016).

RESEARCH METHOD

Objective of the study

- 1) To identify learning disabilities, such as dyscalculia, dysgraphia, and dyslexia, among secondary school students.

Hypothesis:

- 1) There is no significant difference between boys and girls in their learning disabilities (dyscalculia, dysgraphia, and dyslexia).

Sample

The study population comprises all 9th-grade students enrolled in private secondary schools located within the Nashik District of Maharashtra. To ensure a representative sample, a random sampling method was employed, resulting in the selection of one hundred 9th-grade students. These students were chosen from various private secondary schools across both rural and urban settings within the district. This approach aims to capture a diverse range of backgrounds and experiences, providing a comprehensive understanding of the factors influencing the student population in this specific educational context.

Variables

- **Independents variables:**

- 1) Gender a) Male b) Female

- **Dependent Variables:**

- 1) Learning Disabilities (Dyscalculia, Dysgraphia, and Dyslexia).

Research Tools

- 1) **Learning Disability Battery by Bhargava & Bhardwaj:** A structured self-administered questionnaire, incorporating both open- and closed-ended questions from the learning disability battery by Bhargava and Bhardwaj, was employed to

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compare learning disabilities among early adolescents in government and private schools. Demographic variables such as gender and caste were considered. The questionnaire was divided into three parts: Part 1 focused on dyscalculia, Part 2 addressed dysgraphia, and Part 3 explored dyslexia. The scoring of these questions followed the guidelines provided in the manual for the learning disability battery by Bhargava and Bhardwaj.

Statistical Analysis

The t-test used in this study.

STATISTICAL ANALYSIS AND DISCUSSIONS

Table No. 1.1 highlighting the significant differences in learning disabilities (dyscalculia, dysgraphia, dyslexia) among various groups of secondary school students

Learning Disabilities	Male Students		Female Students		N	df	t Value
	Mean	SD	Mean	SD			
Dyscalculia	25.48	3.75	21.45	4.13	100	98	5.10**
Dysgraphia	52.36	3.68	49.74	3.74	100	98	3.53**
Dyslexia	17.45	3.58	13.01	3.94	100	98	5.89**

*Significant at 0.01** = 2.62, 0.05* = 1.98*

This study examines significant differences in learning disabilities (dyscalculia, dysgraphia, and dyslexia) among male and female secondary school students. The table presents a comparative analysis of these disabilities across genders, using t-tests to determine statistical significance. The results highlight potential gender-based disparities in learning difficulties, which have implications for educational interventions and support services.

Dyscalculia - The data reveals a statistically significant difference in dyscalculia between male and female students ($t = 5.10$, $p < 0.01$). Male students exhibit a higher mean score (25.48) compared to female students (21.45), suggesting that dyscalculia may be more prevalent or severe among male secondary school students.

Dysgraphia - While a significant difference exists in dysgraphia between genders ($t = 3.53$, $p < 0.01$), the magnitude of the difference appears less pronounced compared to dyscalculia. Male students show a slightly higher mean score (52.36) than female students (49.74). This suggests that dysgraphia may be more prevalent or severe among male students, but the effect size might be smaller than that observed for dyscalculia.

Dyslexia - The results indicate a highly significant difference in dyslexia between male and female students ($t = 5.89$, $p < 0.01$). Similar to dyscalculia, male students exhibit a higher mean score (17.45) compared to female students (13.01).

The study demonstrates significant gender differences in the prevalence or severity of dyscalculia, dysgraphia, and dyslexia among secondary school students. These findings underscore the importance of gender-sensitive approaches to the identification, assessment, and intervention of learning disabilities. Educational institutions should consider implementing strategies that address the specific needs of male and female students with learning difficulties. Further research is necessary to explore the biological, psychological, and sociocultural factors that may contribute to these gender-based disparities.

CONCLUSION

1. Male students are more likely to experience dyscalculia than female students.
2. Male students might encounter greater or more frequent challenges related to dysgraphia.
3. Dyslexia is more prevalent among male students than female students.

Recommendations

1. After gaining insight into the challenges faced by dyscalculic students, teachers may adopt tailored instructional strategies to meet their unique needs.
2. Instruction can be enhanced by using diverse visual, auditory, and audiovisual aids to help students grasp fundamental concepts.
3. Understanding Dyscalculia can enable teachers and parents to create a supportive learning environment for children by fostering awareness of different learning difficulties.
4. Recognizing Dyscalculia empowers teachers and parents to collaborate in organizing content to facilitate effective learning for these students.
5. Educators need to be familiar with a variety of teaching techniques to help these children comprehend, learn, and successfully complete their math assignments.

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Conflict of Interest

The author declared no conflict of interests.

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