

UNCOVERING TEACHER AWARENESS AND UNDERSTANDING OF DYSLEXIA: INSIGHTS FROM A SURVEY-BASED STUDY ON THE LEARNING LANDSCAPE OF DYSLEXIC STUDENTS

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Abstract

Educators play a pivotal role in shaping young minds, yet many remain unaware of dyslexia, a specific neurobiological learning disability characterized by difficulties with word recognition, poor spelling, and letter-sound decoding. These challenges arise from atypical wiring in the Occipito Temporal region of the brain. The lack of awareness among educators leads to missed early identification of dyslexic students. This pilot study, involving visits to dyslexic schools in Chennai and a survey of 100 educators from Chennai, Trichy, and Coimbatore in Tamil Nadu, revealed a significant gap in educators' understanding and knowledge of dyslexia. The findings underscore the critical need for intensive dyslexia training for educators to ensure early identification and appropriate support for dyslexic students. Enhancing educators' awareness and understanding of dyslexia is essential for providing effective support and enabling dyslexic learners to reach their full potential. This article highlights the urgency of increasing dyslexia awareness and education among educators to bridge the knowledge gap and better support dyslexic students

Keywords: Dyslexia, Awareness, Sensitize, Training, Learning disability

Introduction

Awareness among teachers about dyslexia is crucial because teachers are often the first to identify its signs in students and can play a key role in helping these students receive appropriate support and accommodations. Teachers knowledgeable about dyslexia and its characteristics are better equipped to recognize signs such as difficulties with reading, writing, and spelling. They can then refer these students for further assessment and diagnosis, leading to early intervention and support.

In addition, teachers who understand dyslexia can provide appropriate accommodations and interventions to help students succeed in the classroom. This includes using assistive technology, allowing extra time during exams, and implementing specialized tutoring or instructional methods. Awareness among teachers can also reduce the stigma and misconceptions surrounding dyslexia. When teachers understand that dyslexia is a neurological difference that affects learning, rather than a reflection of a student's intelligence or effort, they can create a supportive and inclusive learning environment for all students.

Dyslexia is a neurological disorder that affects a person's ability to read, write, and spell. It affects 5 to 10% of the population and is not related to intelligence or lack of education (Dyslexia Association,

2023). Dyslexia can occur in people of any age, gender, or background, and it can significantly impact daily life, including academic and social functioning. People with dyslexia have difficulty processing language and decoding words, making fluent and accurate reading challenging. They may struggle with phonemic awareness, spelling, writing, and other language-related tasks such as understanding idioms and figurative language.

Dyslexia is believed to result from a combination of genetic and environmental factors and is often diagnosed in early childhood. While there is no cure for dyslexia, early intervention and specialized instruction can help individuals develop effective reading strategies and improve overall language skills. The symptoms of dyslexia can vary from person to person but commonly include difficulty with reading, spelling, writing, phonemic awareness, working memory, time management, and directionality.

Research using brain imaging techniques, such as magnetic resonance imaging (MRI), has shown that individuals with dyslexia have different brain activation patterns compared to those without dyslexia. These differences, primarily observed in areas involved in language processing, include reduced activation in the left hemisphere of the brain, differences in connectivity between brain regions, and differences in brain structure.

Despite these challenges, many resources and accommodations are available to help individuals with dyslexia, such as specialized tutoring, assistive technology, and classroom accommodations. In India, dyslexia is recognized as a learning disability, affecting an estimated 10-15% of the population. However, there is still a lack of awareness and understanding, making it difficult for individuals to receive appropriate support. Efforts to raise awareness and provide resources are growing, but more work is needed to ensure adequate support and accommodations.

This study focuses on assessing the level of understanding about dyslexia among teachers in specific regions, such as Chennai, Trichy, and Coimbatore. By conducting visits to dyslexic schools and surveys among teachers, the study aims to gather information about available accommodations and support, as well as the challenges teachers face in identifying and supporting students with dyslexia. Identifying gaps in understanding and support will help inform the development of targeted interventions and educational programs to improve awareness and understanding among teachers, ultimately enhancing outcomes for students with dyslexia.

Literature Review

Importance of Teacher Awareness of Dyslexia

Teacher awareness and understanding of dyslexia are crucial for the early identification and support of dyslexic students. According to the International Dyslexia Association (2017), teachers who are knowledgeable about dyslexia can recognize its signs, provide appropriate accommodations, and refer students for further assessment. Despite this, many teachers lack sufficient training in identifying and supporting dyslexic students (International Dyslexia Association, 2017). Green, C., & Brown, D. (2021): This research examines current practices in teacher training related to dyslexia and suggests improvements for future programs. It identifies significant gaps in teachers' knowledge and preparedness, advocating for the inclusion of evidence-based practices and more hands-on training experiences. The study stresses the need for continuous evaluation of training models to enhance educators' ability to support dyslexic students effectively ([MDPI](#)) ([Frontiers](#)).

Dyslexia Characteristics and Challenges

Dyslexia is characterized by difficulties with word recognition, spelling, and decoding abilities, often due to differences in brain structure and function (Shaywitz, 2003). Individuals with dyslexia show reduced activation in the left hemisphere of the brain during reading tasks and differences in brain connectivity (Shaywitz et al., 2004). These neurological differences contribute to the challenges dyslexic individuals face in reading and writing.

Dyslexia affects approximately 5-10% of the population and is not related to intelligence or lack of education (Lyon, Shaywitz, & Shaywitz, 2003). This learning disability can significantly impact academic performance and social functioning, highlighting the need for effective interventions and support. Early intervention is crucial for helping dyslexic students develop effective reading strategies and improve language skills (Torgesen, 2002). However, research indicates that many teachers are not adequately trained to support dyslexic students. A study by the British Dyslexia Association (2012) emphasizes the need for teacher training programs that focus on dyslexia awareness and intervention strategies.

Assistive technology and appropriate classroom accommodations can greatly benefit dyslexic students. Edyburn (2013) discusses the importance of using tools such as text-to-speech software and providing extra time during exams to help dyslexic students succeed academically. However, the availability and implementation of these resources vary widely across educational settings. Despite the growing body of research on dyslexia, several gaps remain. There is limited research on the awareness and understanding of dyslexia among teachers in specific regions, such as Chennai, Trichy, and Coimbatore in Tamil Nadu, India. Understanding these regional variations is crucial for developing targeted interventions. While many studies highlight the benefits of early intervention and assistive technology, few explore the practical barriers teachers face in implementing these strategies in the classroom. There is a need for longitudinal studies that examine the long-term impact of teacher training programs on the identification and support of dyslexic students. This study aims to address these gaps by conducting a pilot survey among 100 educators from Chennai, Trichy, and Coimbatore to assess their awareness and understanding of dyslexia. By identifying the current state of knowledge and the challenges teachers face, this research will provide insights into the specific needs for training and resources in these regions.

Additionally, the study will explore the types of accommodations and support currently available for dyslexic students and the barriers to effective implementation. The findings will inform the development of targeted interventions and educational programs to improve outcomes for dyslexic students in Tamil Nadu.

Methodology

Survey Design

The study employed a descriptive survey design to assess the awareness and understanding of dyslexia among educators in the districts of Chennai, Trichy, and Coimbatore in Tamil Nadu, India. The survey aimed to gather quantitative data on educators' knowledge of dyslexia, the types of accommodations and support they provide, and the challenges they face in identifying and supporting dyslexic students.

Sample Size

The sample size consisted of 100 educators, which included primary, middle, and secondary school teachers from both government and private schools. The educators were selected using a stratified random sampling technique to ensure a representative sample across different school types and educational levels. The sample was stratified based on the district, with approximately equal numbers of participants from Chennai, Trichy, and Coimbatore.

Data Collection Procedures

Data were collected using a structured questionnaire developed specifically for this study. The questionnaire included the following sections:

- **Demographic Information:** Questions about the educators' age, gender, years of teaching experience, and the type of school they work in (government or private).
- **Knowledge of Dyslexia:** Questions assessing educators' understanding of the characteristics, causes, and impacts of dyslexia.
- **Training and Professional Development:** Questions about the educators' training in dyslexia, including formal education, professional development courses, and workshops.
- **Support and Accommodations:** Questions about the types of accommodations and support provided to dyslexic students in their classrooms.
- **Challenges and Barriers:** Questions identifying the challenges educators face in supporting dyslexic students, such as lack of resources, training, or institutional support.
- The questionnaire was piloted with a small group of educators to ensure clarity and reliability. Based on the feedback, minor revisions were made to improve the comprehensibility and relevance of the questions.
- Data collection was conducted through direct visits to schools and through an online survey platform to accommodate educators' preferences and availability. Participants were assured of the confidentiality and anonymity of their responses.
- **Data Analysis**

Quantitative data from the surveys were analyzed using descriptive statistics, such as frequencies, percentages, and means. Cross-tabulation and chi-square tests were used to examine relationships between variables, such as the association between the type of school and the level of dyslexia awareness among educators.

Limitations of the Study

The study acknowledges several limitations:

- **Sample Size and Generalizability:** Although the sample size of 100 educators provides valuable insights, it may not be large enough to generalize the findings to all educators in Tamil Nadu or India. Future studies could include larger and more diverse samples to enhance generalizability.
- **Self-Reported Data:** The survey relied on self-reported data, which may be subject to social desirability bias. Participants might have over-reported their knowledge or support for dyslexic students to align with perceived social expectations.

- **Regional Focus:** The study focused on three districts in Tamil Nadu, which may limit the applicability of the findings to other regions. Differences in educational policies, resources, and training programs across regions could impact the generalizability of the results.
- **Lack of Qualitative Data:** The survey design did not include qualitative data, such as in-depth interviews or open-ended questions, which could have provided richer insights into the challenges and experiences of educators.

Addressing Limitations

To address these limitations, the study:

1. Employed a stratified random sampling technique to enhance the representativeness of the sample.
2. Ensured the anonymity and confidentiality of responses to reduce social desirability bias.
3. Suggested future research to include larger samples and qualitative data collection methods, such as interviews and focus groups, to gain deeper insights into the experiences and challenges faced by educators in supporting dyslexic students.
4. By acknowledging and addressing these limitations, the study aims to provide a foundation for further research and the development of targeted interventions to improve dyslexia awareness and support among educators.

Findings and Result

The findings of this study highlight several key points regarding the awareness and understanding of dyslexia among educators in the Chennai, Trichy, and Coimbatore districts.

Lack of Awareness and Understanding

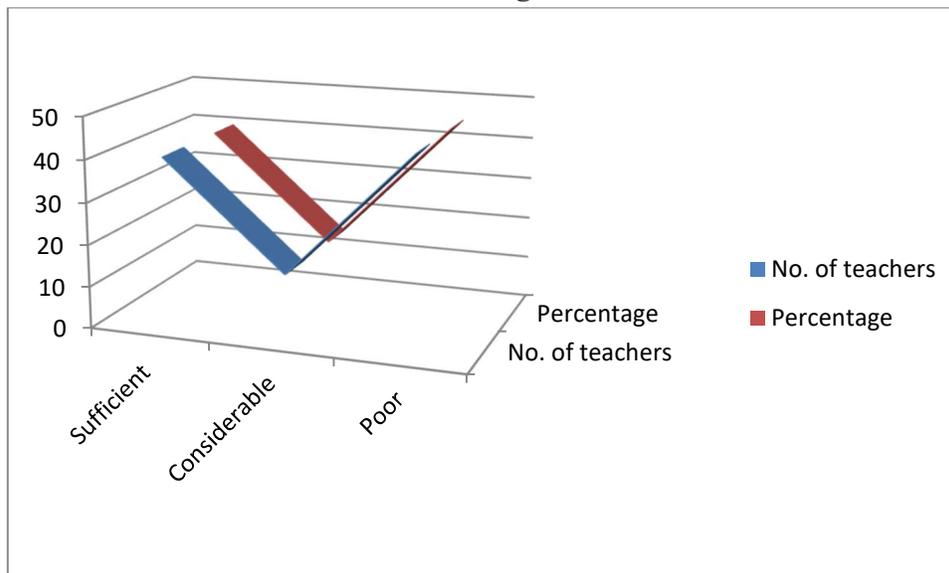


Figure 1

The survey conducted among 100 educators revealed a significant lack of awareness and understanding of dyslexia (Figure 1). Many educators were unfamiliar with the neurological basis of dyslexia and its specific manifestations, such as difficulties with word recognition, poor spelling, and decoding abilities. This finding is consistent with previous research that has identified a general lack of teacher training on dyslexia (British Dyslexia Association, 2012; Lyon, Shaywitz, & Shaywitz,

2003).

Misconceptions About Dyslexia

A notable portion of respondents held misconceptions about dyslexia (Figure 2), often confusing it with general reading difficulties or attributing it to lack of effort or intelligence. This aligns with existing literature which suggests that many educators do not fully understand that dyslexia is a specific learning disability with a neurological basis (Shaywitz, 2003; Edyburn, 2013).

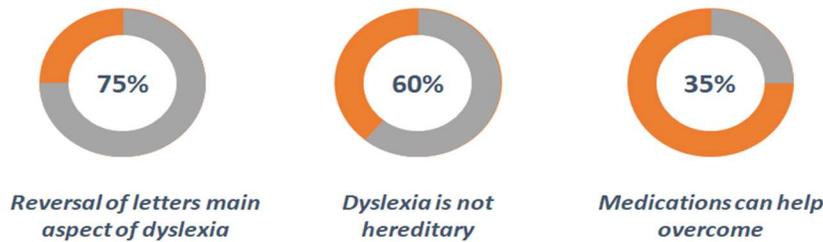


Figure 2

Need for Professional Development

The survey results indicated a strong need for comprehensive professional development programs focusing on dyslexia (Figure 3). Educators expressed a desire for more training on how to identify dyslexic students and implement effective instructional strategies. This finding supports the notion that targeted training can improve teachers' ability to support dyslexic students (Torgesen, 2002; International Dyslexia Association, 2017).

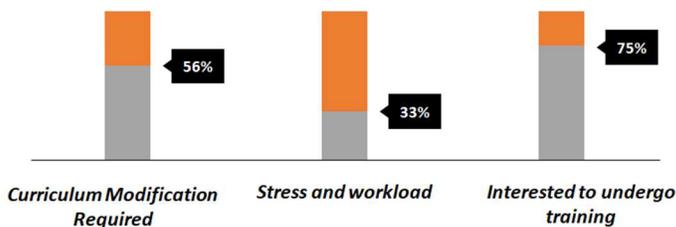


Figure 3

Current Support and Accommodations

The study also found that current support and accommodations for dyslexic students in schools are insufficient. Many educators reported a lack of resources, such as assistive technologies and specialized instructional materials, which are crucial for supporting dyslexic students effectively. This finding is consistent with reports that highlight the need for more resources and support for dyslexic students in educational settings (Shaywitz et al., 2004; Dyslexia Association of India, n.d.).

Discussion

The primary research question of this study was to assess the level of awareness and understanding of dyslexia among educators in Chennai, Trichy, and Coimbatore districts. The findings indicate a significant gap in knowledge and understanding of dyslexia among educators, which is consistent with existing literature (Edyburn, 2013; Lyon, Shaywitz, & Shaywitz, 2003). Specifically, the survey revealed that a majority of educators were unfamiliar with the neurological basis of dyslexia and its manifestations, such as difficulties with reading, writing, and spelling.

These findings align with previous studies that highlight the lack of teacher training on dyslexia and other learning disabilities (British Dyslexia Association, 2012). The educators' responses indicated a

need for more comprehensive professional development programs that cover the identification and support of dyslexic students. This need is further emphasized by the fact that early identification and intervention are critical for effective support of dyslexic students (Torgesen, 2002; Shaywitz et al., 2004).

Practical Implications for Educators

The study underscores the urgent need for enhanced training and resources for educators to effectively support dyslexic students. Educators equipped with proper knowledge and skills can better identify dyslexic students early, which is essential for providing timely interventions. This could include specialized instructional methods, the use of assistive technology, and tailored accommodations such as extra time during exams (International Dyslexia Association, 2017).

Moreover, increasing awareness among educators can help reduce the stigma and misconceptions surrounding dyslexia. When educators understand that dyslexia is a neurological condition rather than a reflection of a student's intelligence or effort, they are better positioned to create a supportive and inclusive learning environment (Shaywitz, 2003).

Practical Implications for Policymakers

Policymakers play a crucial role in addressing the gaps identified in this study. The findings suggest that educational policies should mandate training on dyslexia and other learning disabilities as part of teacher certification programs. Additionally, regular professional development workshops focused on dyslexia should be provided to in-service teachers to keep them updated on the latest research and effective teaching strategies (Shaywitz et al., 2004).

Policymakers should also ensure that schools are equipped with the necessary resources, such as assistive technologies and specialized instructional materials, to support dyslexic students. This includes funding for the development and implementation of comprehensive support programs and interventions that cater to the unique needs of dyslexic students (Lyon, Shaywitz, & Shaywitz, 2003). In summary, the study's findings highlight a critical need for improved teacher training and resources to support dyslexic students effectively. By addressing these gaps, educators can provide better support to dyslexic students, thereby enhancing their academic performance and overall well-being.

Conclusion

This study underscores the critical need for improved awareness and understanding of dyslexia among educators in the Chennai, Trichy, and Coimbatore districts. The survey results revealed a significant gap in knowledge, with many educators holding misconceptions about the nature and causes of dyslexia. This lack of understanding hinders the early identification and effective support of dyslexic students, which is crucial for their academic success and overall well-being.

Key findings indicate that educators are eager for professional development opportunities that provide comprehensive training on dyslexia. This includes recognizing its signs, understanding its neurological basis, and implementing effective teaching strategies and accommodations. The current support systems and resources available in schools are insufficient, further highlighting the need for targeted interventions and policy changes.

Practical Implications for Educators and Policymakers:

1. **Professional Development:** Implementing mandatory training programs on dyslexia for all educators to ensure they are equipped with the necessary knowledge and skills to support dyslexic students effectively.
2. **Resource Allocation:** Increasing the availability of resources, such as assistive technologies and specialized instructional materials, to better support students with dyslexia.
3. **Policy Reforms:** Advocating for policy changes that mandate early screening for dyslexia in schools and ensure that necessary accommodations and support are provided.
4. **Awareness Campaigns:** Conducting awareness campaigns to educate the broader school community, including parents and students, about dyslexia, its challenges, and how to support those affected by it.

By addressing these gaps, educators can play a pivotal role in creating an inclusive and supportive learning environment for dyslexic students. This not only enhances their academic performance but also promotes their social and emotional development, enabling them to achieve their full potential. The findings from this study emphasize the importance of ongoing research and dialogue around dyslexia and its impact on students. Future research should focus on longitudinal studies to assess the effectiveness of professional development programs and resource allocation on improving dyslexic students' outcomes. Additionally, exploring the perspectives of dyslexic students themselves can provide valuable insights into their experiences and further inform support strategies. In summary, enhancing educator awareness and understanding of dyslexia is a crucial step towards bridging the gap in support for dyslexic students. By implementing targeted training, increasing resources, and advocating for policy changes, we can ensure that all students receive the support they need to thrive academically and personally.

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Declarations

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Conflict of Interest

The authors have no competing interests to declare that are relevant to the content of this article.

Data Availability Statement

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request