

Teachers' Perspectives on the Role of Speech and Language Pathologists in the Rehabilitation of Children with Dyslexia: A Survey-Based Study

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Abstract

Background: Dyslexia is a neurological disorder that affects reading and writing abilities due to persistent difficulties in word recognition, decoding, and spelling. These conditions may impact numerous aspects of learning, such as reading, writing, mathematics, and communication. Dyslexia is the most well-known learning disability. speech and language pathologists (SLPs) are critical in helping people with learning disabilities. This study aimed to measure the knowledge and awareness of a sample of Egyptian teachers about the role of SLPs in rehabilitating children with dyslexia.

Methods: A survey was conducted using a questionnaire of 39 multiple-choice questions, provided to 100 teachers from 10 different national schools from two areas in Cairo and Giza. All teachers graduated from the same college, and none work as SENCO (special education coordinator). The questionnaire was provided online using the Monkey Survey, and the answers were collected within one week. Each participant was scored on the correctness of their answers out of the maximum score of 39.

Results: Only six questions were answered correctly by > 70% of the participants, and 50% responded correctly to 1/3 of the questions. The mean score of the 100 teachers was 19 ± 4 . (range: 6-31). The median percentage of the score was 46.2% (range: 15.4%-79.5%). The median score was reached by 56% of the teachers. The scores were not affected by age or sex of participants. The scores in the 6th of October City schools were significantly higher than in the 5th settlement (20.1 ± 3.9 vs. 17.0 ± 3.0 , respectively, $p < 0.001$). The minimum success score (28, 70%) was reached only by two female teachers; their school has a special needs class and a supporting unit.

Conclusion: Teachers in Egypt's national schools lack knowledge about the role of SLPs in rehabilitating children with dyslexia. Only two out of 100 teachers answered 70% of the survey questions correctly. Teachers need to be educated and trained about dyslexia and its management.

Keywords: Dyslexia, Teachers, Speech and Language Pathologists (SLPs)

1. Introduction

A particular type of learning disability known as dyslexia is typified by poor spelling and decoding skills and challenges with accurate and/or fluent word identification. Compared to other cognitive capacities and the delivery of efficient classroom education, these difficulties are frequently unanticipated. As a neurological condition, dyslexia affects between 5% and 10% of people [1].

Slow spoken and written language processing, poor focus, trouble following directions, and difficulties with word attack skills—the capacity to deconstruct unfamiliar words into familiar parts—are just a few symptoms children with dyslexia may display [2]. Despite having sufficient intelligence, drive, and access to education, these issues might result in difficulty with reading, writing, and spelling [3].

Teachers are essential in recognizing and assisting dyslexic pupils. According to research, teachers may not fully understand the underlying causes of dyslexia or practical therapeutic approaches, even though they commonly acknowledge the behavioral indicators of the illness. Teachers must learn more about dyslexia to employ effective teaching strategies, such as individualized support and structured literacy training, to help dyslexic students succeed [4]. Educators must thoroughly grasp dyslexia to detect it early and deliver successful interventions. This will improve the educational outcomes for kids with dyslexia [3,5].

Since dyslexia is essentially a language-based learning problem, speech-language pathologists (SLPs) are essential in the evaluation and treatment of autistic children. SLPs are educated to spot phonological awareness deficiencies, a fundamental dyslexic

challenge that impacts a child's capacity to identify and manipulate spoken word sounds. Using formal and informal measurements and standardized tests, SLPs examine language processing skills, phonemic awareness, and quick naming abilities—all essential for developing reading skills. SLPs focus on the core language skills needed for reading and writing success [6]. Early identification allows for timely intervention, significantly improving literacy outcomes [7].

To support children with dyslexia, SLPs work in conjunction with parents, teachers, and reading specialists to apply evidence-based intervention strategies. They also use structured literacy—strategies, including explicit teaching of sound-symbol relationships, multisensory methods, and phonemic drills [8].

SLPs also aid in developing spoken language skills, such as vocabulary, syntax, and storytelling ability, all of which support reading comprehension. By treating both written and spoken language impairments, SLPs help close the gap between oral communication and literacy, ensuring that children with dyslexia receive comprehensive treatment tailored to their needs [9].

This study aimed to measure teachers' knowledge of the role of SLPs in diagnosing and rehabilitating children with dyslexia.

2. Subjects and Methods

2.1. Study Group

One hundred teachers shared in this survey were selected from 10 different national schools; five are located in the 6th of October City, and the other five are located in the 5th settlement. Their age ranged from 30 to 50 years. All teachers graduated from the same college, and none worked as SENCO (special education coordinator). After selection, online consent was obtained for the sharing and publishing of this research. An online survey was sent using a Monkey survey, and within one week, the 100 teachers answered all questions. For this study to be beneficial, a 4-minute video about dyslexia and the role of SLPs at the end of the survey was watched by all the teachers, and a question about how beneficial this video was answered. All teachers were asked if they had dealt with any special needs before and whether their school had a special education support unit, as there was a shortage of these units in most of the schools in Egypt.

3. Method

The survey was designed to check the teachers' knowledge about the role of SLPs in rehabilitating children with learning disabilities. Thirty-nine questions were customized specifically for this purpose (Table 2). The first five questions were designed

mainly to test the general knowledge about learning disabilities, whether the teachers are aware of learning disabilities, and the most common type of dyslexia.

From questions 6 to 12, teachers were asked about SLPs, if they are aware of the term SLP, if they know what they do, and if they have any idea about their role in supporting children. Questions 13, 14, and 25 were about IEP, which is very important in rehabilitating children with dyslexia. Question 15 was explicitly customized to ensure the teachers knew what dyslexia is or the term asked in question 2. From questions 16 to 19, teachers were tested to see if they could recognize children with dyslexia among all the children in their classes.

Question 20 was particular about whether the teacher should or shouldn't refer a child with suspected dyslexia to a specialist. In question 21, there are two correct answers: psychologist and SLP. It was clarified in the questionnaire that more than one answer could be accurate. In this question, we meant to write psychologists and SLPs in the answers to check if teachers know that they can refer dyslexic children to an SLP or if they only see the psychologist's role.

Questions 22 to 24 are about inclusion and how the teachers think they can support these children. More detailed questions about SLPs are from questions 26 to 39, where teachers who know what SLPs are, their role in learning disabilities, and how they should collaborate to help dyslexia children will be able to answer correctly. These questions were designed so the teacher with general knowledge couldn't guess the correct answer, so they either knew the SLP role or not.

3.1. Statistical Methods

Statistical analysis was done using IBM© SPSS© Statistics version 23 (IBM© Corp., Armonk, NY, USA). Numerical data were expressed as mean, standard deviation, or median and range as appropriate. Qualitative data were expressed as frequency and percentage. A comparison between the two groups was done using an independent sample t-test for quantitative data. Pearson product-moment was used to estimate the correlation between numerical variables. A p-value < 0.05 was considered significant.

4. Results

Table 1 shows a description of the participant teachers. A supporting unit for children with learning disabilities was reported only by ten teachers. Also, 31 teachers reported the presence of a special class for disabled children in their schools.

Variable	Value	
Age (years)	Mean±SD: 39.1±5.2	Range: 30-50
Sex (male/female)	37/63	
A supporting unit in the school, n (%)	10 (10%)	
A special needs class in the school, n (%)	31 (31%)	

Table 1: Description of Participants

Table 2 shows the number of teachers who answered correctly to each question. Only six questions were answered correctly by > 70% of the participants. One-third of the questions were answered correctly by 50% of the participants.

	Correct
1-What is your teaching experience?	30 (30%)
2. What grade levels do you teach? (Select all that apply)	90 (90%)
3 Have you received any formal training on dyslexia?	40 (40%)
4. Have you worked with students diagnosed with dyslexia?	85 (85%)
5. How many students with dyslexia do you currently teach or have taught in the past?	100 (100%)
6. How often do you encounter students with dyslexia in your classroom?	25 (25%)
7. Do you know what a Speech-Language Pathologist (SLP) is?	57 (57%)
8 How familiar are you with the role of Speech and Language Pathologists (SLPs) in dyslexia intervention?	95 (95%)
9 Do you believe SLPs play a significant role in the rehabilitation of students with dyslexia?	15 (15%)
10. Have you ever worked collaboratively with an SLP for a student with dyslexia?	15 (15%)
11. In your opinion, which areas of dyslexia intervention should SLPs focus on the most? (Check all that apply)	56 (56%)
12. Do you believe SLPs should be more involved in the classroom setting to support students with dyslexia?	99 (99%)
13. What does IEP stand for in the context of students with learning disabilities?	49 (49%)
14. What is an Individualized Education Plan (IEP)?	42 (42%)
15. What role should an SLP play in a multidisciplinary team supporting students with dyslexia?	9 (9%)
16. How frequently should SLPs collaborate with teachers to support students with dyslexia?	29 (29%)
17. What methods would improve collaboration between teachers and SLPs? (Select all that apply)	64 (64%)
18. Have you ever attended a workshop or training session led by an SLP?	38 (38%)
19. Would you be interested in professional development workshops on dyslexia intervention with SLPs?	30 (30%)
20 Do you think SLPs should work with teachers on individualized education plans (IEPs) for students with dyslexia?	47 (47%)
21. Do you feel confident implementing recommendations from SLPs in your classroom?	35 (35%)
22. What are the biggest challenges in supporting students with dyslexia in your classroom?	58 (58%)
23. What strategies do you currently use to support students with dyslexia?	59 (59%)
24. Inclusive education refers to:	83 (83%)
25. What is the role of an Individualized Education Plan (IEP) in supporting students with Dyslexia?	48 (48%)
26. What is the primary goal of SLPs when working with students in an educational setting?	45 (45%)
27. What is the primary role of Speech and Language Pathologists (SLPs) in addressing dyslexia?	45 (45%)
28. What additional support do you need to help students with dyslexia effectively?	60 (60%)
29. SLPs can help students with dyslexia by:	42 (42%)
30. SLPs often collaborate with teachers to:	39 (39%)
31. In what settings can SLPs collaborate with teachers to support students with dyslexia?	3 (3%)
32. SLPs can assess and diagnose dyslexia in students.	35 (35%)
33. Which of the following is NOT a communication or language skill that SLPs may address in students with dyslexia?	30 (30%)
34. When should teachers consider referring students to an SLP for evaluation and support?	33 (33%)
35. Which of the following strategies can teachers use to collaborate effectively with SLPs in supporting students with dyslexia?	40 (40%)
36. What is the primary goal of SLPs when working with students with dyslexia?	34 (34%)
37. Have you observed improvements in students with dyslexia after working with an SLP?	68 (68%)
38. Collaboration between teachers and SLPs can lead to:	36 (36%)
39. What challenges do you think limit the effectiveness of SLP interventions for dyslexia?	44 (44%)

Table 2: Description of the Percentage of Correct Answers to All of the 39 Questions

Each participant was scored on the correctness of their answers. The maximum score was 39 correct answers. The mean score of the 100 teachers was 19±4. The median score was 18, ranging from 6 to 31. The median percentage of the score was 46.2% (range: 15.4%-79.5%). The median score was reached by 56% of the teachers. A score of 28 (70%) is considered the minimum success

score. It was reached only by two female teachers aged 38 and 40 in a school located in the 6th of October city with a special needs class and a supporting unit. Both scored 31 (79.5%).

	Mean±SD	Range
Crude Score (out of 39)	19±4	18 (6-31)
Interquartile range	17-20	
Percentage of score	48.7±10.3%	46.2% (15.4%-79.5%)

Table 3: The Total Score of All Participants

There is no correlation between scores and age of participants ($r = -0.128$, $p=0.204$). Also, the total score was not affected by the participants' sex ($p=0.990$). The mean score was 18.5 ± 4.0 in males and 18.5 ± 3.6 in females. However, the teachers' scores in the 6th of October City schools were significantly higher than in the 5th settlement (20.1 ± 3.9 vs. 17.0 ± 3.0 , respectively, $p < 0.001$).

5. Discussion

Teachers are essential in spotting possible learning problems in the classroom. Their observations and tests can help start the examination and support process for pupils, even though they cannot diagnose dyslexia. Over 70% of participants answered only six questions correctly, and 50% responded only one-third. The players' sex did not affect the final score ($p=0.990$). There is no correlation between scores and the age of participants ($r = -0.128$, $p=0.204$) (table 1).

The instructors in October 6th City outperformed those in New Cairo ($p < 0.001$) because, out of the 10 schools, only one of the five schools in October 6th City had a special education needs supporting unit. Only two female instructors, ages 38 and 40, at a school in the City on October 6th achieved the minimum success score of 28. Both educators received a score of 31, or 79.5%. The school has a Supporting Unit and a Special Needs Class (table 2).

Most instructors are unaware of SLPs' function in dyslexia, as evidenced by the success score of 28 and the median score of 18 (46%), attained by 56% of the teachers. Every teacher received a perfect score on Q5 (which asks what dyslexia most frequently impacts language processing and reading). Additionally, Q2 (90%) and Q4 (85%) had accurate responses. This suggests that although all teachers are familiar with the term dyslexia, they are unsure what it means, as evidenced by their answers to other questions (table 3) [10].

It's crucial to remember that educators are essential in detecting dyslexia early on. However, experts like educational psychologists or speech-language pathologists should make an official diagnosis and do the necessary treatments. Early detection and intervention can significantly enhance the results for students with dyslexia. For dyslexia to be appropriately addressed, teachers and Speech-Language Pathologists (SLPs) must work together. Scientific study supports the importance of this partnership in offering all-encompassing assistance to dyslexic pupils [11].

SLPs and teachers can collaborate in several ways. They can work together to identify and assess pupils early on, allowing instructors

to submit students for testing if they require SLP services. To identify particular issues, SLPs can perform comprehensive language and communication evaluations [12].

Teachers and SLPs can work together to create and carry out IEPs that are specific to the requirements of dyslexic students [11]. In the classroom and during therapy sessions, teachers and SLPs can collaborate to create and carry out focused treatments that address particular language and communication challenges [13].

Regular collaboration makes ongoing progress monitoring possible. SLPs might modify therapy goals in response to teacher feedback regarding a student's performance in the classroom [14]. Teachers can offer suitable support in the classroom by using language-based methods and modifications that SLPs can share with them. Teachers and SLPs can improve their proficiency in handling dyslexia by participating in collaborative professional development opportunities [13].

In addition to helping kids with learning difficulties, teacher-SLP collaboration promotes a comprehensive, empirically based strategy for resolving these issues. This strategy encourages a thorough comprehension of the children's needs and a focused response to aid the development of their language and communication skills.

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6. Conclusion

The knowledge of teachers in the national schools in Egypt about the role of SLPs in rehabilitating children with dyslexia is weak. Only six questions, 2, 4, 5, 8, 12, and 24, were answered correctly by > 70% of the participants. Fifty percent of the participants responded correctly to one-third of the questions. Only 2 out of 100 teachers answered 70% of the survey questions correctly. Teachers need to be educated and trained about dyslexia and their management [15-20].

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