

Efficacy of Specific Learning Disorder Manual: A Pretest-Posttest Survey Among Primary School Teachers

Sahana Muralikrishna¹, Binsy G², Varsha M³

¹Associate Professor, MVM College of Speech and Hearing, Bengaluru, Karnataka

²SLP Grade I, MVM College of Speech and Hearing, Bengaluru, Karnataka

³Assistant Professor, MVM College of Speech and Hearing, Bengaluru, Karnataka

Corresponding Author: Sahana Muralikrishna

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ABSTRACT

Background: Specific learning disorder (SLD) is a neurodevelopmental disorder that are generally typically diagnosed in school going children. The teachers play a pivotal role in identifying SLD.

Aim: The present study aimed to develop a manual for primary school teachers on SLD and to investigate the efficacy of the manual by conducting a pre and post-test survey.

Method: The developed SLD manual consisted of signs and symptoms, causes, assessment, and rehabilitation. A questionnaire was constructed based on the developed manual which consisted of 34 questions. A pre-test survey was carried out, after which the manual was given to the participants and given two weeks' time to go through the manual, after which posttest survey was conducted.

Results and discussion: The results revealed that primary school teachers had somewhat moderate level of understanding about SLD. They were not aware about symptoms, rehabilitation options and no in-depth knowledge about SLD. Their performance improved significantly after they referred the manual and all of them opined that there is a need for in-depth education for primary school teachers about SLD.

To conclude, primary school teachers lack adequate knowledge about SLD. Since teachers are the primary identifiers of academic difficulties of children, their expertise is of utmost significance because it involves the identification of SLD's at the initial stage. Therefore, a manual about SLD will definitely uplift the knowledge levels of teachers and help in early identification & intervention of SLD.

Keywords: Specific learning disorder, Awareness, Identification, Early intervention

INTRODUCTION

Specific Learning Disorder is a communication disorder that mainly affects the development of literacy and language-related skills. "The term 'specific learning disorder' means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations."^[9]

Several studies on the epidemiology, risk factors, and significance of early intervention for specific learning disorder have been thoroughly investigated in nations all over the world. Numerous studies on children with impairments were conducted in India as well, and standardised tools for assessment and treatment were developed. However, review of literature reveals that very less focus has been given to determine the incidence & prevalence of specific learning disorder (SLD). There

have been few studies carried out in India to determine the incidence and prevalence of SLD.

LITERATURE REVIEW

To determine the prevalence and patterns of learning disorder a cross sectional study was conducted by researchers [14], by incorporating three-stage screening process in school-age children in a northern Indian city. the first stage involved teachers identifying 3rd and 4th-grade students studying in government schools who were 'at risk' for learning disorder, a total of 1211 from 3600 children were identified. In the second stage, the 1211 children identified to be at risk were assessed using Specific Learning Disabilities – Screening Questionnaire (SLD-SQ), 360 were screened positive in the final stage. They assessed all at risk students using the Brigance Diagnostic Inventory (BDI) in the final stage. The researchers confirmed that during the 3rd stage, 108 children were confirmed as having learning disorder. Their study clearly showed us that learning disorder is a serious concern in young school-aged children. They concluded that early identification is very much critical in assisting such children to gain achievement in school and daily life.

The frequency of certain specific learning difficulties among primary school students in a South Indian city was measured.[12] The examiners carried out a cross-sectional study using a multistage stratified randomized cluster sampling methodology. All the schools in the city which followed state syllabus in 2007–08 were geographically stratified into four sectors namely northeast, northwest, southeast and southwest areas. They obtained a sample of 1101 children were obtained from 5 public and 6 private schools. The findings of their study reveal that the prevalence of Specific Learning Disorder (SLD) was 15.7% in a South Indian city. Whereas 12.5% had dysgraphia, 11.2% had dyslexics and 10.5% of the participants had dyscalculia. Their study showed that the prevalence of

SLD is at higher side of the previous estimations in India. The results also show that nearly 15% of primary school children who are scholastically backward are affected by SLD. The estimation of the prevalence of specific learning disabilities in India has been increased suggesting the need for early intervention. The investigators express the need for more prevalence studies, remedial education, and policy interventions to manage SLD's at mainstream educational system to improve school performance in Indian children.

The classification of learning difficulties and attention deficit/hyperactivity disorder was done.[20] They claimed that the reading issue is a cognitive functioning disorder. Additionally, they stated that dyslexia are the most prevalent type of learning disorder seen in kids. The incidence rates of reading disorder in school children varied between 5.3% to 11.8%.[7]

Indian primary school teachers' awareness and expertise of dyslexia were evaluated.[12]

A self-documented questionnaire was administered to 314 teachers from 32 schools. Based on their answers to the questionnaire, it was determined whether or not they were acquainted about dyslexia. Out of the 314 respondents to the study, 52 teachers had at least once suspected a student of having dyslexia and had alerted higher-ups, counselled, or urged the person to consult a doctor. This group consisted of all the teachers who had previously undergone training. This group consisted of all the teachers who had previously undergone training. Out of the 314 respondents, the researchers claimed that 262 teachers knew what dyslexia was, and 271 instructors thought that training consulting on diagnosing dyslexia had become crucial for teachers. Additionally, they claimed that 52 teachers had revealed they had no knowledge of dyslexia or its symptoms. The majority of respondents (93.3%) felt their knowledge of dyslexia was poor and were unaware of the condition. This research demonstrates a favourable relationship between prior

training and teaching experience and the development of dyslexia knowledge.

Specific learning difficulties are widespread in children and a major source of stress. Early intervention by trained specialists in baby steering is crucial since a delay in expressive language development can result in learning disabilities in the future. If it is not intervened at the earliest, learning difficulties can result in exam failure as well as emotional and behavioural problems in children. Additionally, these kids may experience problems associated to stress. Therefore, it is imperative to conduct scientific evaluations on all young children to help identify learning impairments early on. The red flag signs and symptoms of a particular learning issue might be seen in a toddler as early as the primary school years. The difficulty a child seems to have learning tasks that include alphabets, structuring thoughts into sentences, obeying instructions, and performing simple mental calculations might be understood as a distinct learning impairment in that child. Specific learning impairments in children put them in a variety of challenging educational scenarios. It's crucial to understand one's skills and shortcomings because a child with a specific learning disorder can thrive in extracurricular activities.

In the present scenario, schools place a greater emphasis on imparting academic knowledge to their students and are more knowledge-oriented overall. Some schools even detain "slow learners" from moving on to the next academic level. Educators use a variety of teaching methods in the classrooms. Some schools concentrate on teaching students how to make or shape a particular sound, while others require rote learn the phrases without comprehending how they are often spoken. A multisensory teaching strategy and effective teaching techniques are rarely used in the majority of teaching curricula. The education curriculum chosen in India, where students who underperform in class are regarded as "difficult" or "not bright," is the root of the

majority of issues encountered by a specific learning-disabled child or their family members. Poor attitudes toward people with impairments will develop as a consequence of a lack of knowledge about disorder. A multisensory, structured language approach will be necessary for children with specific learning disorders. A thorough understanding of specific learning disabilities is essential to provide appropriate modifications in a normal classroom setting and to assist a child with a specific learning disorder learn things efficiently.

The school teachers must be able to recognise the symptoms and characteristics of a learning disorder since they're the primary identifier of any specific learning disabilities in a primary school student. To do this, educators need to be trained to comprehend children's specific requirements and be able to select innovative teaching methods that will best meet the needs of children with disabilities.

NEED FOR THE STUDY

Currently there are no set manuals to help the teachers apprehend better about the traits of specific learning disorders. Hence, there is a need for developing a manual for primary school teachers on specific learning disorders. Students of today are the budding futures of all countries. In human resource development, education has a very critical position. Hence, there may be a pressing need to increase consciousness concerning specific learning disorders of children, amongst parents and teachers. The learning disorders of kids should be diagnosed at the earliest and managed scientifically in order, so that we can lead the kids towards a completely successful future.

AIM OF THE STUDY

- To develop a manual about Specific learning disorders for primary school teachers and to measure its efficacy

OBJECTIVES OF THE STUDY

- To develop a manual about specific learning disorders for primary school teachers
- To develop a questionnaire based on the developed manual
- To evaluate the effectiveness of the manual by conducting a pre and post questionnaire survey

MATERIALS & METHODS

The present study aimed to develop a manual about specific learning disorder for primary school teachers and to evaluate the efficacy of the developed manual by conducting pre and post survey. Therefore, the study was carried out in III phases. The Phase I focused on developing the manual about SLD for primary school teachers. The Phase II involved developing the questionnaire based on the developed manual and Phase III was concerned with evaluating the effectiveness of the manual by conducting a pre and post questionnaire survey

Phase I: Development of manual about specific learning disorder (SLD)

The manual developed for SLD focused on many factors concerned about specific learning disorder. The areas covered in the manual included definition of SLD, causes, types, signs and symptoms of SLD, myths and facts about SLD, diagnosis, team members involved in assessment, management of SLD, and list of rehabilitation centres across Bengaluru & Kerala. The manual was prepared based on the available literature. The information for the SLD manual was taken from various profound sources such as published books, journals, and other reliable internet websites.

Content validation of the Specific learning disorder handbook

The manual was given to three Speech Language Pathologists who had minimum of three years of experience, aged between 31 to 35 years for content validation. The

SLP's were asked to rate the manual based on the contents. They were also requested to give suggestions regarding the content of the manual. The content was rated based on a 5-point rating scale. The rating scale that was used is as follows:

1. Too less information
2. Manual provides inaccurate information
3. Manual does not cover enough information about Specific learning disorder
4. Manual does cover most of the information, but needs slight changes
5. Manual has all the information, does not need changes.

The three SLP's who served as judges to validate the content of the manual opined that manual covers most of the information, but needs slight changes. The necessary changes were carried out as suggested by the judges. The suggestions incorporated were again validated by the same three SLP's and the manual was finalized.

Phase II: Development of a questionnaire based on the developed manual

Based on the developed manual, the questionnaire was developed which is a tool to evaluate the awareness about SLD. The questions were constructed based on the contents of the manual. The questions focused on the signs and symptoms of SLD, causes, assessment and rehabilitation. The questionnaire also comprised questions determining the awareness of nearby rehabilitation centres in their area. A total of 34 questions were constructed to evaluate the awareness about SLD among primary school teachers.

A multiple-choice questionnaire layout with a total of 34 questions which comprised of multiple choices for every question with only 1 accurate solution for each was formed based on the self-prepared manual. The questionnaire tool was validated (content validation by 3 experts in the area of speech language pathology). Their suggestions and remarks were included within the very last model of questionnaire,

which led to consensual validation of the same.

Phase III: Evaluating the effectiveness of the manual

Participants

A total of 40 participants from several primary schools in Calicut city, Kerala was selected through non-probability (convenience) sampling procedure. Among the selected 40 participants, only 21 of the participants consented to take part in the present study. Teacher educators aging from 30 years to 55 years with a minimum of 2 years' experience in teaching primary school children were included in the study.

Procedure

In order to evaluate the effectiveness of the SLD manual, the Pre-test- Post-test research design was employed. The research design devised is as shown in Table 1. The permission to collect information was taken from the relevant Education Officer and from the Principal and Headmaster/Headmistress of every faculty.

Table 1 Research design of the study

Pre-test survey (T1)	(X)- Manual	Post-test survey (T2)
Response recorded (R1)	Two weeks' time to read the manual	Response recorded (R2)

The participants were seated comfortably on a chair facing the investigator across the desk in a quiet and distraction-free room. Each participant was given the developed questionnaire. The subjects were asked to fill the questionnaire based on their knowledge. The developed manual about SLD was given to each participant after the completion of the questionnaire filling. The teachers were requested to go through the manual in two weeks' time thoroughly, and to reach the investigator if any clarification on the content was needed. After two weeks' time, a post questionnaire survey was carried out based on the manual. Each correct reaction carried one mark (1) and a wrong answer carried zero (0). Though the questionnaire consisted of 34 questions, only 31 questions were scored. The last

three questions of the questionnaire were not scored as they intended to examine the opinions of participants about certain aspects. Therefore, the maximum score one could achieve was 31 and the minimum score was zero (0).

Scoring and interpretation

The questionnaire consisted either closed "true/ false"; yes/no type questions or multiple-choice questions. The correct and incorrect responses were tallied and tabulated. The total number of correct responses in the pre and post survey were compared to determine the efficacy of SLD manual.

STATISTICAL ANALYSIS

The responses obtained through the survey were subjected to statistical analysis using SPSS version 20 software. The descriptive statistics frequency, mean, standard deviation and median are obtained. The total scores of pre and post-test is subjected to Shapiro Wilks test to test normality. The results revealed that the data is significantly deviating from normal distribution (i.e., $p < 0.05$). Therefore, the non-parametric Wilcoxon Signed rank test was performed to see significant difference between pre and post-test total scores. The Mann Whitney U test was performed to see the significant difference between pre and post test scores with respect to gender and years of experience. The statistical significance values are compared with 0.05 and 0.01 level of significance.

RESULTS & DISCUSSION

The present study aimed at developing a manual for primary school teacher on specific learning disorder. In order to achieve the aim, a manual about SLD was developed. The questionnaire was developed based on the manual. The research design of the study was a pre-test - post-test survey measure. All the participants of the study were asked to fill the questionnaire and the responses were collected. The questionnaire survey was

carried out by one-to-one survey. The responses were tabulated and then statistically analysed by using SPSS software.

The objectives of the study were

- To develop a manual for primary school teachers on specific learning disorder
- To develop a questionnaire based on the developed manual
- Evaluating effectiveness of manual among primary school teachers.

The obtained results for the present study are explained under the following subsections.

Development of the SLD manual

The manual developed on SLD focused on the various factors. The areas covered in the handbook included definition of SLD, types and causes of SLD, signs and symptoms of SLD, diagnosis of SLD, multidisciplinary team management, facts and myths and various rehabilitation or speech therapy centres in and around Bengaluru & Kerala. The information for the SLD manual was taken from various profound sources such as books, journals, and other reliable internet websites. A sample page of the manual has been given in the Appendix A.

To develop a questionnaire based on the developed manual

A total of 34 questions were constructed to evaluate the awareness about SLD among primary school teachers.

4.3 Efficacy of the SLD manual by conducting a pre and post questionnaire survey

For checking the efficacy of SLD manual, the pre-test score and post-test scores were compared. The collected responses were subjected to statistical analysis using appropriate descriptive statistical analysis,

mean, standard deviation and median were obtained. The total scores of pre and post is subjected to Shapiro Wilks test for normality. The results revealed that the data is significantly deviating from a normal distribution ($p < 0.05$). The effect of gender and years of experience on pre and post-test measures were also investigated. Therefore, the non-parametric test was applied in the present study. Wilcoxon signed rank test was performed to see a significant difference between pre and post-test total scores. The Mann Whitney U test was performed to see the significant difference in scores of subjects with less than 5 years and greater than 5 years of experience in pre and post-test scores. The statistical significance values were compared with 0.05 and 0.01 level of significance. Question wise comparison of pre- and post-survey was done. The whole statistical analysis was carried out using SPSS software.

Pre v/s Post-test survey comparison

The table 3 shows the number mean scores for the pre and post-test survey. The Wilcoxon signed rank test were carried out to compare pre and post test scores of the 21 participants. The mean scores recorded for pre-test was 17.86 and the post-test measures revealed a total score of 30.33. when the pre and post scores were compared, it was found that there was a significant difference ($p < 0.000$) between the pre and post-test measures. The improvement in the post test measures could be attributed to the SLD manual that was provided to the participants of the study which comprised resourceful information about SLD. The mean, SD, Median of the pre and post-test measure has been depicted in table 2 and figure 1.

Table 2 Pre-test v/s Post-test mean scores

Pairs	N	Mean	SD	Median	Z	p-value
Pre	21	17.86	5.42	18.00	4.020	0.000**
Post	21	30.33	0.86	31.00		

* Indicates significant at $P < 0.05$ ** Indicates significant at $P < 0.01$

Figure 1

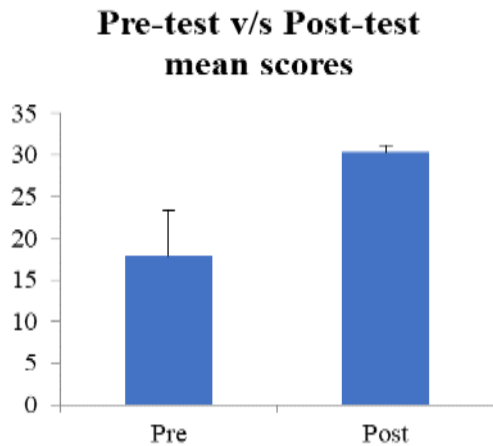


Figure 1: Mean scores of pre-tests and post-test survey

Effect of experience on pre and post-test survey

The effect of the years of experience was considered as a variable for the present study. The Table 3 shows the performance of two groups (above 5 years and below 5

years' experience) on pre-test and post-test measures. The Wilcoxon Singed Rank Test was used to determine the effect of years of experience on test performance. The mean scores of the participants who had less than 5 years' experience is 18.15 in pre-test and 30.62 in post-test. Those participants who had more than 5 years' experience scored 17.28 and 29.87 in pre-test and post-test respectively. From the table 3, it can be observed that there was a significant difference between the two groups. It can be speculated that, younger participants, even if they have less experience performed slightly better when compared to people who had more experience. It was noted that the younger participants had more awareness about the disorder. The mean, SD, Median of the scores in pre-test and post-test measures with regard to years of experience have been shown in Table 4 and graphically represented in Figure 2.

Table 3 Effect of years of experience on pre-test and post-test measures

Experience	Pairs	N	Mean	SD	Median	Z	p-value
Less than 5 years' experience	Pre	13	18.15	5.96	20.00	3.189	0.001**
	Post	13	30.62	0.65	31.00		
More than 5 years' experience	Pre	8	17.28	4.75	16.50	10.69	0.012*
	Post	8	29.87	0.99	29.50		

* Indicates significant at P<0.05 ** Indicates significant at P<0.01

Figure 2

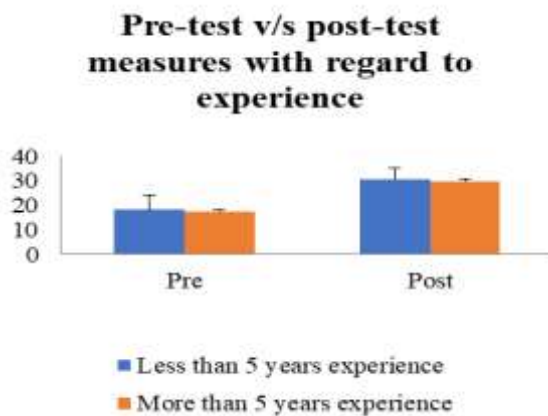


Figure 2: Mean scores of pre and post-test measure with regard to years of experience

Further, the Mann-Whitney U Test was administered to evaluate within group comparison with respect to years of experience. The results of the Mann Whitney U test revealed that there was no significant difference ($p > 0.05$) in the pre-test scores of participants with respect to years of experience. Also, there was no significant difference in mean scores for post-test survey with respect to years of experience ($p > 0.05$). The findings of the Mann Whitney U test have been depicted in Table 4 and graphically represented through Figure 3.

Table 4 Within group comparison with respect to years of experience of pre-test and post-test measures

Pairs	Pairs	n	Mean	SD	Median	Mean Rank	Z	p-value
Pre	Less than 5 years' experience	13	18.15	5.96	20.00	11.19	0.182	0.856
	More than 5 years' experience	8	17.28	4.75	16.50	10.69		
Post	Less than 5 years' experience	13	30.62	0.65	31.00	12.69	1.787	0.074
	More than 5 years' experience	8	29.87	0.99	29.50	8.25		

* Indicates significant at P<0.05 ** Indicates significant at P<0.01

Figure 3

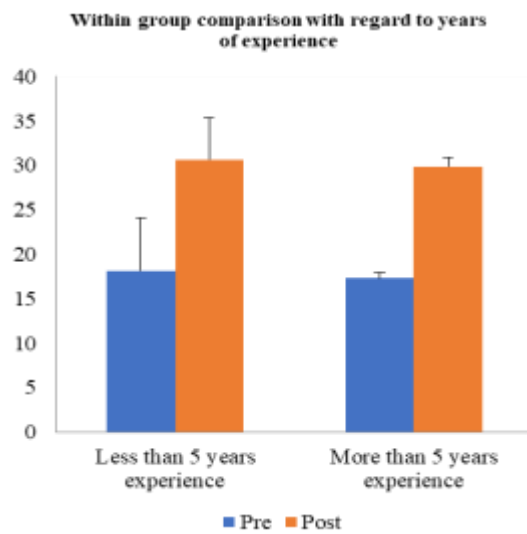


Figure 3: Mean scores of pre and post-test measure (within group comparison) with regard to years of experience

Question-wise comparison of pre and post-test performances

The questions were focused on examining the meaning of specific learning disorders, types and signs and causes of specific learning disorders, examples for general signs and symptoms of a child with specific learning disorder, myths and facts of specific learning disorders, team members involved in the diagnosis, the role of diagnosis, management of specific learning disorders in a school setup.

The pre-test performance of the participants revealed that, primary school teachers were somewhat aware of the SLD, they were still not sure about some of the aspects of SLD. It was noted that, for the questions- “Have you ever heard of the term specific learning disorder?”, “Which one of the following is an example of specific learning disorder?”, “What causes dyslexia?”, “What does SLD affect?”, “Which of these is an example of an effective way to aid SLD children’s learning?”, “Which of these is a difficulty faced by dyslexic children?”, “Students with dysgraphia will struggle to _____”, “Children with dysgraphia can communicate better through _____ than _____”, “ On an average, how many children might be prone to have dysgraphia?”, “Does dysgraphia affects the

intelligence”, “Smarter kids are less prone to specific learning disorders”, “Who do you think plays a major role in differentially diagnosing specific learning disorder?”, “Do you think academic activities should be included in the treatment procedure?” and “Which of the following do you think will help a dysgraphic child to achieve success in school and daily life?” less than 50% correct responses were obtained; For the questions “ Does SLD have a cure?”, “Does a child with SLD fail to achieve success in school?”, “ What can be the key to help children with SLD, to achieve success in school?”, “Who do you think can identify SLD at the earliest?”, “Why might a dyslexic child struggle to learn the new words?”, “What are the different types of SLD?”, “The type of SLD which manifests in the form of writing disorders is termed as _____”, “The type of SLD which manifests in the form of mathematical difficulties is termed as _____”, “Students with dyscalculia will struggle with _____”, “Dyscalculia symptoms may vary across children”, “ Which of the following is an ideal choice for a multidisciplinary team for SLD?, “Treatment for an SLD child should primarily focus on _____”, “ Which of the following do you think will help a dyslexic child to achieve success in school and daily life?, “Which of the following aids in mapping out specific challenges, goals, and accommodates an SLD child?” and “Do modifications in classroom accommodation play a minor role in building concrete reading and writing skills?” the participants achieved more than 50% correct responses; The questions “Are all bright students good writers?” and “ Treatment for an SLD child should primarily focus on _____” had 100% correct responses.

The post- test performance of the participants revealed that the participants exhibited 100% correct response for all the other questions except “What does SLD affect?”, “On an average, how many children might be prone to have dysgraphia?”, “Who do you think plays a

major role in differentially diagnosing specific learning disorder? and “Do you think academic activities should be included in the treatment procedure? The improvement in post-test measure provided substantial evidence that the manual provided to the participants had a positive impact on their understanding about the SLD.

The table 5 depicts the pre and post-test responses of the participants for the questionnaire. The data clearly indicates a significant improvement in the knowledge levels about specific learning disorder among the participants which may be attributed to the manual developed.

Table 5 Question wise pretest-posttest comparison

Question	Pre-test correct responses	Post-test correct responses	Pre-test- Post-test difference (%)
1. Have you ever heard of the term SLD?	47.61 %	100 %	52.39 %
2. Which one among the following is an example of SLD? (MCQ)	38%	100 %	61.91%
3. What causes dyslexia? (MCQ)	33.33%	100%	66.67%
4. What does SLD affect? (MCQ)	47.61%	90.47%	42.86%
5. Can SLD be cured?	71.42%	100%	28.58%
6. Does a child with SLD, fail to achieve success in school?	85.71%	100%	14.29%
7. What can be the key to help them achieve success in school? (MCQ)	76.19%	100%	23.81%
8. Who do you think can identify SLD at the earliest? (MCQ)	57.14%	100%	42.86%
9. Which of these is an example of an effective way to aid SLD children’s learning? (MCQ)	38.09%	100%	61.91%
10. Which of these is a difficulty faced by dyslexic children? (MCQ)	42.85%	100%	57.15%
11. Which of these might be an early sign of dyslexia? (MCQ)	28.57%	100%	71.43%
12. Why might a dyslexic child struggle to learn the new words? (MCQ)	52.38%	100%	47.62%
13. What are the different types of SLD? (MCQ)	66.66%	100%	33.34%
14. The type of SLD which manifests in the form of writing disorders is termed as ----- (MCQ)	52.38%	100%	47.62%
15. Students with dysgraphia will struggle to ----- (MCQ)	47.61%	100%	52.39%
16. Children with dysgraphia can communicate better through ----- & ----- (MCQ)	38.09%	100%	61.91%
17. On an average, how many children might be prone to have dysgraphia? (MCQ)	23.80%	80.95%	57.15%
18. Are all bright students’ good writers?	100%	100%	0
19. Does dysgraphia affect intelligence?	38.09%	100%	61.91%
20. The type of SLD which manifests in the form of mathematical difficulties is termed as ----- (MCQ)	71.42%	100%	28.58%
21. Children with dyscalculia will struggle with ----- (MCQ)	85.71%	100%	14.29%
22. “Dyscalculia symptoms may vary across children” State true or false	80.95%	100%	19.05%
23. “Smarter kids are less prone to specific learning disorders” State true or false	19.04%	100%	80.96%
24. “Which of the following is an ideal choice for a multidisciplinary team for SLD?” (MCQ)	80.95%	100%	19.05%
25. “Who do you think plays a major role in differentially diagnosing specific learning disorder?” (MCQ)	38.09%	95.23%	57.14%
26. “Treatment for an SLD should primarily focus on -----” (MCQ)	100%	100%	-
27. “Do you think academic activities should be included in the treatment procedure?” (Yes/No)	47.61%	66.66%	19.05%
28. “Which of the following do you think will help a dyslexic child to achieve success in school and daily life?” (MCQ)	52.38%	100%	47.62%
29. “Which of the following do you think will help a dysgraphic child to achieve success in school and daily life?” (MCQ)	38.09%	100%	61.91%
30. “Which of the following aids in mapping out specific challenges, goals, and accommodations for an SLD child?”. (MCQ)	90.47%	100%	9.53%
31. “Do modifications in classroom accommodation play a major role in building concrete reading and writing skills?”. (Yes/No)	95.23%	100%	4.77%
32. “Motivations and giving assignments in areas in which the student has a strong interest, would apparently improve the reading and writing skills?” (State True or False)	28.57%	100%	71.43%
33. ““Do you think there is enough awareness among primary school teachers regarding the impact a specific learning disorder would create among primary school children?” (Yes/No)	28.57%	85.71%	57.14%
34. “Are you aware of any rehabilitation centres to refer an SLD child?” (Yes/No)	52.38%	100%	47.62%

Based on the findings of the present study, it can be observed that the respondents found the manual for SLD helpful. The pre-test and post-test questionnaire survey revealed that there was a significant difference in the performance of the participants. The mean scores of the participants were found to be 17.86 and 30.33 during the pre-test and post-test measures respectively. The performance of the participants showed a significant difference ($|Z| - 4.020$, $p < 0.000$). The question-wise analysis also showed that the performance of the participants significantly improved post survey. They were better able to understand the signs and symptoms, the team members involved in the management of children with SLD. It is not farfetched to speculate that the manual was helpful in creating more awareness about SLD among primary school teachers. The study also examined the effect of experience on the performance of respondents on the questionnaire survey regarding the awareness of SLD. The findings of the present study showed that there was a significant difference among the two groups (less than 5 years and more than 5 years' experience) when their pre-test and post-test scores were compared (at $p < 0.001$ for less than 5 years' experience; at 0.012 for more than 5 years of experience). However, when the performance of less experience group with more experienced group, in both pre-test and post-test context, there was no significant differences in the performances (pre-test survey- $|Z| - 0.182$, $p > 0.05$; post-test survey $|Z| - 1.787$, $p > 0.05$). the findings of the study are not in agreement with the study carried out by Shetty and Rai.^[20] They stated that there is a positive correlation between teaching experience and understanding about dyslexia. The results of the present study show that, the respondents with less experience performed slightly better when compared to the more experienced group. This can be attributed to the factor that the younger population would be more susceptible to access social media platforms

or internet through which they could have somewhat understanding about SLD.

The results of the present study showed that the participants had moderate level of knowledge about SLD during the pre-test survey (Mean scores of 17.86 out of a maximum score of 31). The findings of the present study are in accordance with the study carried out by Khatib^[1], who noted that the primary school teachers have moderate level of knowledge about learning disorders. The difference in the pre-test and post-test performances reiterates findings of many other researchers that there is a need for education program about SLD among teachers/ educators to facilitate early identification and intervention. This result supports the study by Mathew and Nagarajaiah^[11], who suggested that teachers should receive more training sessions and instructional materials pertaining to particular learning difficulties. The instructors need potential training, in order to teach students with specific learning disorders.^[3] The developed manual can be utilized as a powerful self-gaining knowledge of the material with the aid of teachers in the future. Teachers themselves can be encouraged to be energetic participants of their training and update their understanding of specific learning disorders. It enables to enhance their capability to identify and manage such children or can be properly referred.

Specific learning disorder is a lifelong prevalent condition. With the right assist, many children with specific learning disabilities can learn to study and write properly. Early identification and treatment are the key to helping specific learning disabled to achieve in school and life. Individuals with a specific learning disorder need help from an instructor, coach, or therapist specifically trained in the use of a multi-sensory, structured language technique. Since the primary identifier of any specific learning-disorder sign could be a teacher, it's a far great deal if teachers are capable of identifying the signs and symptoms of specific learning disorders. If

the special needs of youngsters with learning disabilities are not attended to, it will bring about scholastic backwardness and associated psycho-social problems. Thus, early identification and intervention are very crucial. The ultimate focus of this study was to help instructors by developing a manual that might contribute to the process of identifying youngsters with specific learning disorders. This is a preliminary attempt to develop a manual which can assist the primary school teachers to pick out the trouble faced by the children at the earliest.

CONCLUSION

The aim of the study was to develop a manual for primary school teachers on specific learning disorder. The study comprised of twenty-one primary school teachers with a minimum of two years of experience in teaching. The findings of the current study have certain implications, such as the need for in-depth in-service education for primary school teachers, the importance of incorporating common childhood disorders in the professional instructors' training curriculum, the urgency of advocacy for protecting the rights of children with specific learning disorders, the importance of sensitizing instructors and parents through awareness programs to address the myths and misconceptions associated with specific learning disorders, the urgency of implementing mechanisms at government level to ensure identification, control, and facilitation of provisions, and the importance of appointing specially trained experts like counselors and special educators to work alongside the lecturers in faculties.

To conclude, a look at the awareness about SLD among primary school teachers, has proven that primary school teachers lack adequate knowledge about specific learning disorders. Since teachers are the ones, who might first come across academic difficulties of children, their expertise is of utmost significance because it involves the

identification of specific learning disorders at the initial stage.

The findings of the study can be summarized as follows

- i. There was a significant difference between the pre-test and post-test performance of the respondents of the present study.
- ii. When the performance between less than 5 years' experience and more than 5 years' experience groups were compared, there was no statistically significant difference in terms of mean scores of the participants. Also, it was observed that the younger performed slightly better than the older participants.
- iii. Based on the above findings, it is not implausible to speculate that the manual may be beneficial in bringing about desired changes in the knowledge of primary school teachers to assist kids with specific learning disabilities.

LIMITATIONS OF THE STUDY

The study could not be carried out on a larger sample and the effect of gender on the performances should also be investigated on a larger sample group.

FUTURE DIRECTIONS

The study should be conducted across all the schools across various districts. The study if conducted on a larger scale will have two-fold advantages. One, to understand the knowledge levels of teachers on specific learning disorders; two, to create more awareness about SLD among teachers. The study can also be extended to investigate the awareness about various communication disorders among teachers. The manuals can be developed about various communication disorders which will help the teachers to have better ideas about various communication disorders. This will in turn propagate early identification and early intervention.

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