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A Study of the performances of dyslexic children in reading alphabets and Simple words

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INTRODUCTION

Over the last 15 to 20 years, there has been a great deal of research focused on finding the most effective methods for treating reading disability i.e. dyslexia. One has the opportunity to evaluate not only the effect of specific interventions on reading skill but also to devise technologies that make it possible to study the way in which the brain responds to these interventions. This body of knowledge is complex, in part because although all individuals with dyslexia have a similar problem, namely, difficulty in reading, they have heterogeneous characteristics, and depending on the child's developmental level, the demands of reading and the required skills are quite different.

Learning Disability:
The term Learning Disability (LD) is used to refer to a range of neurological conditions that affect one or more of the ways that a person takes in, stores, or uses information. Learning disabilities are specific, not global, impairments.

"Specific learning disability" means a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations.

Dyslexia
Dyslexia is a learning disability characterized by problems in reading, writing, speaking, listeningor spelling. It results from the ability to process graphic symbols. In many cases, dyslexia appear to be inherited.

The word dyslexia is derived from the Greek word *dys* (meaning poor or inadequate) and the word *lexis* (meaning or language). Dyslexic children seem to have trouble in learning early reading skills, problems in hearing individual sounds in words, analyzing whole words in parts, and blending sounds in words. Letters such as "d" and "b" may be confused. Often a child with dyslexia has a problem translating language into thought (such as in listening or reading). Dyslexia is also referred to as developmental reading disorder (DRD).

Diagnosing Dyslexia
Dyslexia is usually diagnosed during elementary school. In some cases, it doesn't become apparent until a child is older and is expected to read and comprehend longer and more complex material. Continuing problems with advanced reading, spelling, and learning a foreign language may be signs that a bright teenager has dyslexia.

Delays in identifying kids with dyslexia can create a bigger reading problem and a drop in self-esteem. So, it's important to recognize symptoms early in elementary school and begin reading instruction right away.

Dyslexia runs in families. Kids of parents with a history of reading struggles are likely to have problems, too. Children who struggle with learning to talk, as preschoolers also are at higher risk for dyslexia. The reading progress of kids with either or both of these factors should be closely monitored.

A reading specialist or psychologist, either at school or in the community, can only formally diagnose dyslexia through a comprehensive evaluation. Pediatricians often know the signs of dyslexia and can guide families to proper help. It's important that the person who evaluates a child be properly trained and has experience with dyslexia.

Need And Importance Of The Study
There have been innumerable efforts to develop different approaches to remedied dyslexics in a special school and classes abroad. In a country like India, where there are no special schools or other organisational units and a comprehensive remedial programme to suit Indian population there is a greater need to develop such programme.

Also, research in India and abroad reveals that very little work is done in developing a remedial programme to improve reading comprehension skills among dyslexic children.

The present study suggests that, as a specific type of ideographic script, reading difficulty is primarily caused by single-word-identification. In addition, the comprehension of the context and word-level-processing seem to be closely interrelated to each other, which means, students need to refer to the context to decide how to segment a sentence into semantic units before they can understand the words.

Thus, in teaching and training, educational practitioners should not only emphasise students' single character identification; instead, teaching multiple reading skills is necessary in literacy instruction, including how to segment sentences, how to identify compound words, and how to visually recognize a single character.

Statement Of The Problem:
The problem for the present study may be stated as "**A Study of the performances of dyslexic children in reading alphabets and Simple words"**

Objectives Of The Study:
Keeping in mind the need, nature and scope of the study as discussed, the following objectives were specified as objectives for the study

1. To study the significant difference between pre-test and post-test scores of performance of dyslexic children in reading alphabets.
2. To study the significant difference between pre-test and post-test scores of performance of dyslexic children in reading kagunitha.
3. To study the significant difference between pre-test and post-test scores of performance of dyslexic children in reading simple words.

Hypotheses
1. There is no significant difference between pre-test and post-test scores of performance of dyslexic children in reading alphabets
2. There is no significant difference between pre-test and post-test scores of performance of dyslexic children in reading kagunitha
3. There is no significant difference between pre-test and post-test scores of performance of dyslexic children in reading simple words

Design Of The Study
The study is of Quasi Experimental in nature. The single group pre-test and the post-test are adopted for the study.

Population And Sample Of The Study
All the dyslexic children those were studying in IV standard in the academic year 2021-22 were taken for the study. Out of the students in IV standard studying in Kannada medium as their medium of instruction in the Kakati cluster of Belgaum District only, 15 were identified as dyslexic children.

Tools Used In The Study
1. Rutter's Performa: Data information blank for Teachers
2. Questionnaires for Dyslexic students on "Word Recognition" and "Reading Comprehension" which was prepared by the researcher.

DATA COLLECTION

After the completion of construction of tools, the researcher contacted the headmasters/headmistress of the selected schools personally and requested them to permit to administer the tools to collect the required data. Thus, with the permission of the authority of the school researcher personally approached the teacher and the 15 dyslexic students in 6 Government Primary schools of Kakati cluster in Belgaum District and gave them the pre-test consisting of 23 questions. After the Pre-test, the investigator took 8 sessions in each school for conducting the remedial teaching. The investigator took about 2 months (48 sessions) to conduct the programme in all the schools. After the remedial teaching, the investigator gave the Post-test to the 15 dyslexic students. The 15 dyslexic students were given sufficient time to respond. The investigator then collected all the Post-test questionnaire form the dyslexic students.

Statistical Techniques Used:
To fulfil the hypotheses, the paired t-test was applied to find out the significant difference between pre-test and post-test scores of total performances and its dimensions of dyslexic children that is reading alphabets, reading kagunitha, reading simple words.

Analysis And Interpretation

Table 1: Differences and Squares of the Difference Scores Obtained by Dyslexic children on Pre-test and Post-test Performance in Reading Alphabets

No	Pre-test	Post-test	D	D^2
1	5	14	9	81
2	8	14	6	36
3	6	12	6	36
4	8	15	7	49
5	7	14	7	49
6	9	14	5	25
7	8	14	6	36
8	9	14	5	25
9	6	13	7	49
10	7	14	7	49
11	8	13	5	25
12	7	14	7	49
13	8	14	6	36
14	8	14	6	36
15	9	14	5	25
Total	**113**	**207**	**94**	**606**

Hypothesis1 There is no significant difference between pre-test and post-test scores of performance of dyslexic children in reading alphabets

To test this hypothesis, the paired t-test was applied and the results are presented in the following table.

Table 2: Results of Paired t-test Between Pre-test and Post-test Scores of Performance of Dyslexic Children in Reading Alphabets

Test	Mean	Std.Dv.	Mean Diff.	SD Diff.	Paired t-value	p-value	Signi.
Pre-test	7.5333	1.1872					
Post-test	13.8000	0.6761	6.2667	1.0998	22.0686	<0.05	S

From the results of the above table, it is observed that, a significant difference was observed between pre-test and post-test scores of performance of dyslexic children in reading alphabets ($t=22.0686$, $p<0.05$) at 0.05% level of significance. Hence the null hypothesis rejected and alternative hypothesis accepted. It can be concluded that, the post-test performance scores are higher when compared to pre-test performance scores in reading alphabets of students. In another words, the student's performance showed improvement in post-test in reading alphabets after remedial teaching when compared to pre-test.

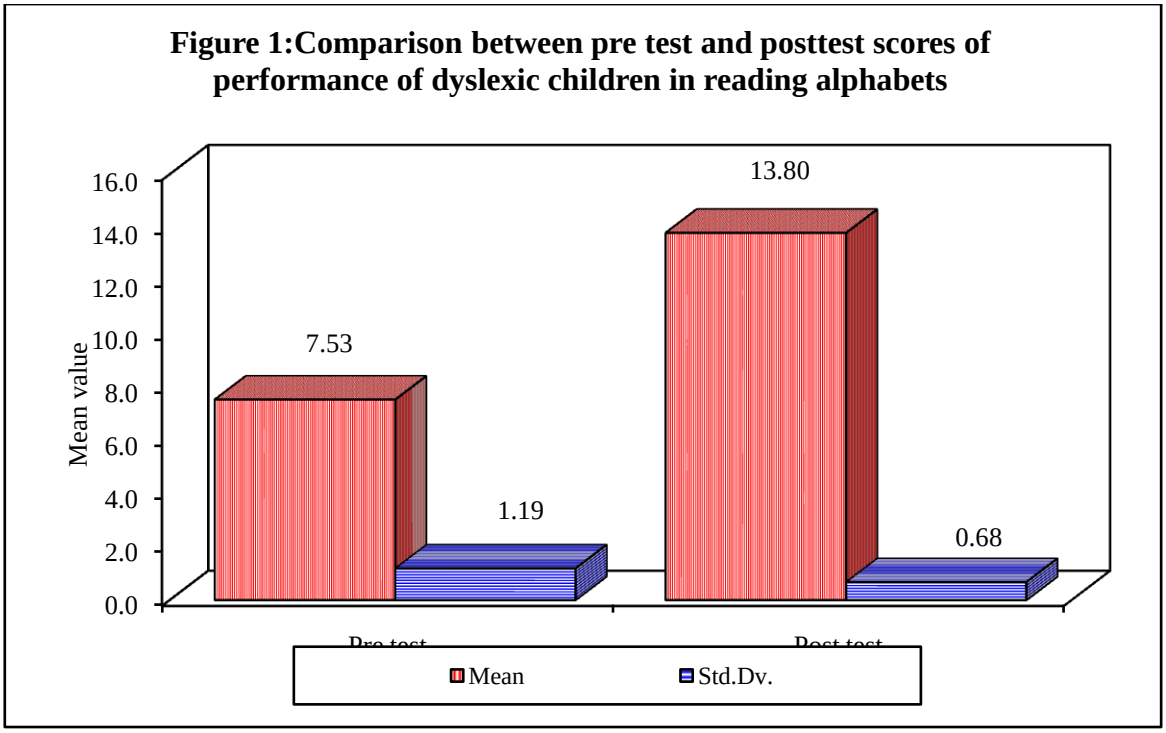


Table 3: Differences and Squares of the Difference Scores Obtained by Dyslexic children on Pre-test and Post-test Performance in reading Kagunitha

No	Pre-test	Post-test	D	D2
1	3	6	3	9
2	4	5	1	1
3	3	6	3	9
4	5	8	3	9
5	4	7	3	9
6	4	6	2	4
7	4	6	2	4
8	5	6	1	1
9	3	6	3	9
10	3	7	4	16
11	4	6	2	4
12	5	6	1	1
13	3	8	5	25
14	4	7	3	9
15	4	6	2	4
Total	**58**	**96**	**38**	**114**

Hypothesis 2: There is no significant difference between pre-test and post-test scores of performance of dyslexic children in reading Kagunitha

To test this hypothesis, the paired t-test was applied and the results are presented in the following table.

Table 4: Results of Paired t-test Between Pre-test and Post-test Scores of Performance of Dyslexic Children in reading Kagunitha

Test	Mean	Std.Dv.	Mean Diff.	SD Diff.	Paired t-value	p-value	Signi.
Pre-test	3.8667	0.7432	2.5333	1.1255	8.7178	<0.05	S
Post-test	6.4000	0.8281					

From the results of the above table, it is observed that, a significant difference was observed between pre-test and post-test scores of performance of dyslexic children in reading kagunitha (t=8.7178, p<0.05) at 0.05% level of significance. Hence the null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that, the post-test performance scores are higher when compared to pre-test performance scores in reading kagunitha of students. In another words, the student's performance showed improvement in post-test in reading kagunitha after remedial teaching when compared to pre-test.

Figure 2:Comparison between pre test and posttest scores of performance of dyslexic children in reading kagunitha

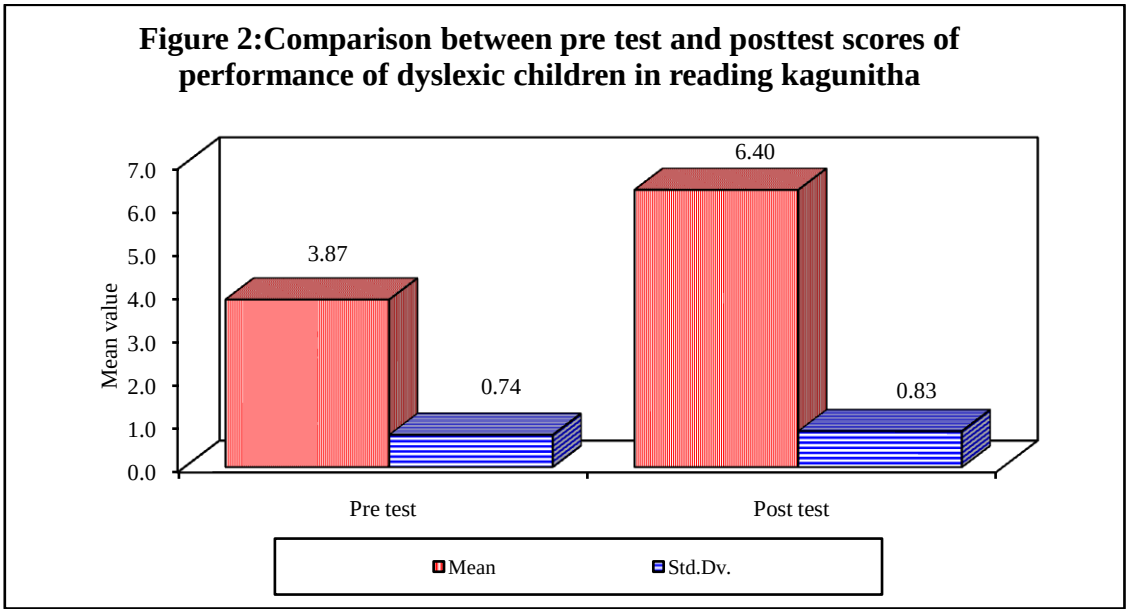


Table 5: Differences and Squares of the Difference Scores Obtained by Dyslexic children on Pre-test and Post-test Performance in reading simple words

No	Pre-test	Post-test	D	D2
1	9	12	3	9
2	10	14	4	16
3	9	12	3	9
4	11	13	2	4
5	9	12	3	9
6	10	12	2	4
7	10	12	2	4
8	11	14	3	9
9	9	13	4	16
10	10	12	2	4
11	10	12	2	4
12	10	13	3	9
13	9	13	4	16
14	11	12	1	1
15	10	13	3	9
Total	**148**	**189**	**41**	**123**

Hypothesis 3: There is no significant difference between pre-test and post-test scores of performance of dyslexic children in reading simple words

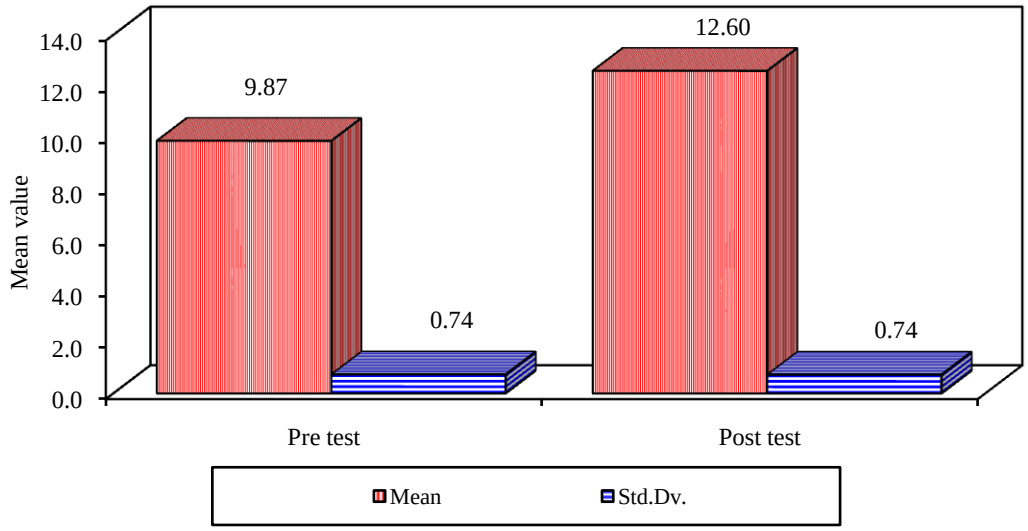
To test this hypothesis, the paired t-test was applied and the results are presented in the following table.

Table 6: Results of Paired t-test Between Pre-test and Post-test Scores of Performance of Dyslexic Children in reading simple words

Test	Mean	Std.Dv.	Mean Diff.	SD Diff.	Paired t-value	p-value	Signi.
Pre-test	9.8667	0.7432	2.7333	0.8837	11.9791	<0.05	S
Post-test	12.6000	0.7368					

From the results of the above table, it is observed that, a significant difference was observed between pre-test and post-test scores of performance of dyslexic children in reading simple words ($t=11.9791$, $p<0.05$) at 0.05% level of significance. Hence the null hypothesis rejected and alternative hypothesis accepted. It can be concluded that, the post-test performance scores are higher when compared to pre-test performance scores in reading simple words of students. In another words, the student's performance showed improvement in post-test in reading simple words after remedial teaching when compared to pre-test.

Figure 4.3:Comparison between pre test and posttest scores of performance of dyslexic children in reading simple words



FINDINGS OF THE STUDY

1. The student's performance showed improvement in post-test in reading alphabets after remedial teaching when compared to pre-test.
2. The student's performance showed improvement in post-test in reading kagunitha after remedial teaching when compared to pre-test.
3. The student's performance showed improvement in post-test in reading simple words after remedial teaching when compared to pre-test.

DISCUSSION AND CONCLUSION

It is believed that the screening test be used to identify problematic students have not been officially identified as dyslexic but whom the teacher suspects as having unusual difficulties (i.e., not simply low English proficiency). A student scoring low on this test would then go for further testing at one of the recognized dyslexia centres. This test would be used for the benefit of both student and teacher in early identification of the problem since time extension or other facilitating conditions need to be noted at the beginning of the semester and not close to the final exam.

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