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A Study to Assess the Selected Learning Difficulties Among Primary School Students in Selected City

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Abstract

Introduction: *Learning difficulties (LDs) are challenges that impact the brain's capacity to comprehend, process, assess, or retain information. These issues hinder children's ability to learn at a pace comparable to those unaffected by LDs, and these children do not fit into other disability categories.* ***Materials and method:*** *The research employed a descriptive study design and was carried out at a chosen primary school. The population included learning difficulty students. The total population size is 50. Non-Probability sampling technique was used for recruiting samples for the study.* ***Results:*** *The study's results indicate that the highest average score for dysgraphia is 1.3, with a median of 1 and a standard deviation of 0.48305. Similarly, dyscalculia also recorded a maximum mean of 1.3, a median of 1, and a standard deviation of 0.48305.* ***Conclusion:*** *Present study conclude that specific learning difficulties are present in students which are having significance with their demographic variables.*

Keywords: Study, Assess, Learning, Difficulties, Primary School Students.

INTRODUCTION

"Take your time healing, as long as you want. Nobody else knows what you've been through. How could they know how long it will take to heal you?"

—Abertoli

Learning difficulties (LDs) encompass challenges that hinder the brain's capacity to receive, process, analyze, or retain information, leading to slower learning compared to those unaffected by LDs. These difficulties are not classified under other disability categories. Dysgraphia, dyslexia, and dyscalculia are common LDs. In India, among primary school children, the prevalence rates of dyslexia, dysgraphia, and dyscalculia have been reported as 11.2%, 12.5%, and 10.5%, respectively. Dysgraphia is a learning disability that impacts writing abilities, involving a complex mix of motor skills and information processing. It originates from the Greek word "graph," which relates to writing and the action of the hand, and the prefix "dys," indicating impairment, with the suffix pointing to a specific condition. Between 10% and 30% of children face challenges with writing, though the exact prevalence varies depending on how dysgraphia is defined. Like many neurodevelopmental disorders, dysgraphia tends to be more prevalent in boys than in girls, and handwriting issues are a common cause for seeking occupational therapy. The term dyscalculia was introduced in the 1940s by Dr. Josef Gerstmann. Unlike dyslexia and other similar learning disabilities, dyscalculia has not received much attention and remains relatively unrecognized, with limited awareness of its existence [1–4].

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NEED FOR STUDY

Learning difficulties are issues that impair the brain's capacity to receive, process, analyze, or retain information. These challenges hinder children from learning at the same pace as their peers who do not face such difficulties, and these children are not classified under any other types of disabilities.

OBJECTIVES

1. Evaluate indications and manifestations of learning difficulties in elementary school pupils.
2. Evaluate the presence of dyscalculia among elementary school pupils.
3. Evaluate the presence of dysgraphia among elementary school pupils.
4. Establish correlations between learning disabilities and chosen demographic factors.

HYPOTHESIS

A significant correlation exists between learning difficulties and the demographic variables that have been selected.

MATERIAL AND METHOD

The research employed a descriptive study design and was carried out in a selected primary school. The population included learning difficulty students. The total population size is 50. Non-Probability sampling technique was used for recruiting samples for the study [5].

SAMPLE SELECTION CRITERIA

The study will limited to students of both sexes, who were:

- Studying in primary school.
- In age group between 6 yr to 10 yr.
- Able to understand and reply in Marathi.
- Available during data collection period.
- Willing to participate and cooperate in the study

STATISTICAL ANALYSIS

Section I: Description of socio demographic profile of primary school students.

Section II: Description of extraneous variables of primary school students.

The Mean, Median and Standard deviation of study to assess the selected learning difficulties among primary school students in selected city of Dysgraphia (Table 1).

Table 1. Assessment of Dysgraphia to assess the selected learning difficulties among primary school students in selected city.

S.N.	Assessment of Dysgraphia	Max. score	No. of Sample	Mean	Median	SD
1	Grip your pen and write your name.	1-6 7-14 15-20	1	0.2	0	0.4216
2	Draw 1 circle and 1 square in space provided.		2	0.5	0	0.8498
3	Copy each shape in a space provide.		3	0.3	0	0.4830
4	Write the following words in a vertical box.		4	0.8	1	0.7888
5	Match the similar shapes.		5	0.6	0.5	0.6992
6	Copy each paragraph in a space provided.		6	0.4	0	0.5163
7	Draw vertical and horizontal lines.		7	1	1	0.6666

S.N.	Assessment of Dysgraphia	Max. score	No. of Sample	Mean	Median	SD
8	Trace each figure.		8	0.7	1	0.6749
9	Circle no. 5 in the following table.		9	0.8	1	0.7888
10	Copy each Marathi para in space provided.		10	0.9	1	0.7378
11	Grip your pen and write your name.		11	0.6	0.5	0.6992
12	Draw 1 circle and 1 square in space provided.		12	1	1	0.6666
13	Copy each shape in a space provide.		13	1	1	0.6666
14	Write the following words in a vertical box.		14	0.6	0	0.8432
15	Match the similar shapes.		15	0.6	0.5	0.6992
16	Copy each paragraph in a space provided.		16	0.9	1	0.5676
17	Draw vertical and horizontal lines.		17	1.1	1	0.5676
18	Trace each figure.		18	0.7	0	0.9486
19	Circle no. 5 in the following table.		19	0.8	1	0.6324
20	Copy each Marathi para in space provided.		20	1.2	1	0.6324
21	Grip your pen and write your name.		21	1	1	0.6666
22	Draw 1 circle and 1 square in space provided.		22	0.9	1	0.5676
23	Copy each shape in a space provide.		23	0.8	1	0.6324
24	Write the following words in a vertical box.		24	1.3	1	0.4830
25	Match the similar shapes.		25	0.7	1	0.4830
26	Copy each paragraph in a space provided.		26	1	1	0.6666
27	Draw vertical and horizontal lines.		27	1	1	0.6666
28	Trace each figure.		28	1.1	1	0.7378
29	Circle no. 5 in the following table.		29	0.6	1	0.5163
30	Copy each Marathi para in space provided.		30	1	1	0.6666
31	Grip your pen and write your name.		31	0.5	0	0.7071
32	Draw 1 circle and 1 square in space provided.		32	0.3	0	0.6749
33	Copy each shape in a space provide.		33	1.1	1	0.7378
34	Write the following words in a vertical box.		34	0.8	1	0.6324
35	Match the similar shapes.		35	1	1	0.8164
36	Copy each paragraph in a space provided.		36	0.9	1	0.7378
37	Draw vertical and horizontal lines.		37	1.1	1	0.7378
38	Trace each figure.		38	1.2	1	0.6324
39	Circle no. 5 in the following table.		39	1	1	0.8164
40	Copy each Marathi para in space provided.		40	1.3	1	0.4830
41	Grip your pen and write your name.		41	0.9	1	0.7378
42	Draw 1 circle and 1 square in space provided.		42	1	1	0.6666
43	Copy each shape in a space provide.		43	0.8	1	0.7888
44	Write the following words in a vertical box.		44	1.1	1	0.7378
45	Match the similar shapes.		45	1.2	1	0.6324
46	Copy each paragraph in a space provided.		46	0.4	0	0.5163
47	Draw vertical and horizontal lines.		47	0.4	0	0.5163
48	Trace each figure.		48	0.7	1	0.6749
49	Circle no. 5 in the following table.		49	0.2	0	0.4216
50	Copy each Marathi para in space provided.		50	0.8	1	0.6324

The Mean, Median and Standard Deviation of study to assess the selected learning difficulties among primary school students in selected city of Dyscalculia (Table 2).

Table 2. Assessment of Dyscalculia to assess the selected learning difficulties among primary school students in selected city.

S.N.	Assessment of Dyscalculia	Score	Sample No.	Mean	Median	SD
1	How many spots are there.		1	0.5	0	0.8498
2	Complete the sequence.		2	1	1	0.6666
3	Which number is more than other number		3	0.8	1	0.7888
4	Circle the number that sum of ten.		4	0.9	1	0.8756
5	Is this sum correct.		5	0.8	1	0.7888
6	Match the pair.		6	0.4	0	0.5163
7	Find the big diagram and tick on them.		7	0.7	1	0.6749
8	Draw the following diagram.		8	0.8	1	0.6324
9	Fill the following table.		9	0.8	1	0.6324
10	Color each shape as per asked.		10	0.6	1	0.5164
11	How many spots are there.		11	0.8	1	0.6324
12	Complete the sequence.		12	0.8	1	0.6324
13	Which number is more than other number		13	0.3	0	0.4830
14	Circle the number that sum of ten.		14	0.7	1	0.6749
15	Is this sum correct.		15	0.5	0	0.7071
16	Match the pair.		16	0.7	1	0.6749
17	Find the big diagram and tick on them.		17	1	1	0.6666
18	Draw the following diagram.		18	0	0	0
19	Fill the following table.	1-6	19	0.5	0	0.7071
20	Color each shape as per asked.		20	0.9	1	0.7378
21	How many spots are there.	7-14	21	0.9	1	0.7378
22	Complete the sequence.		22	0.9	1	0.7378
23	Which number is more than other number	15-20	23	0.8	1	0.7888
24	Circle the number that sum of ten.		24	1	1	0.6666
25	Is this sum correct.		25	0.8	1	0.7888
26	Match the pair.		26	1.3	1	0.6749
27	Find the big diagram and tick on them.		27	1	1	0.8165
28	Draw the following diagram.		28	0.9	1	0.5676
29	Fill the following table.		29	1	1	0.6666
30	Color each shape as per asked.		30	0.6	0.5	0.6999
31	How many spots are there.		31	0.6	0.5	0.6999
32	Complete the sequence.		32	0	0	0
33	Which number is more than other number		33	0.8	1	0.6324
34	Circle the number that sum of ten.		34	0.8	1	0.6324
35	Is this sum correct.		35	1.1	1	0.7378
36	Match the pair.		36	1	1	0.6666
37	Find the big diagram and tick on them.		37	1	1	0.6666
38	Draw the following diagram.		38	1	1	0.8165
39	Fill the following table.		39	1.1	1	0.7378
40	Color each shape as per asked.		40	1	1	0.8165
41	How many spots are there.		41	1	1	0.6666
42	Complete the sequence.		42	1.3	1	0.4830

S.N.	Assessment of Dyscalculia	Score	Sample No.	Mean	Median	SD
43	Which number is more than other number		43	0.9	1	0.7378
44	Circle the number that sum of ten.		44	1	1	0.6666
45	Is this sum correct.		45	1.2	1	0.6324
46	Match the pair.		46	1.1	1	0.7378
47	Find the big diagram and tick on them.		47	0.5	0	0.7071
48	Draw the following diagram.		48	0.6	1	0.5164
49	Fill the following table.		49	0.6	0.5	0.6999
50	Color each shape as per asked.		50	0.1	0	0.3162

Section I: Deals with analysis of data related to association between learning difficulties with their selected demographic variables.

Part 1: Dysgraphia

The Table 3 shows that application of test among primary school students in Dysgraphia having significance in Type of Family, Area of Residence, Education of Parent, Type of Delivery and Nutrition Status. Does not having any significance with Age, Sex, No. of Siblings, Occupation of Parents, Socioeconomic Status and Birth Complication according to π^2 test ($p<0.05$) were found statically significant level.

Table 3. Description of socio demographic profile of primary school students in Dysgraphia having significance.

S.N.	Demographic Variable	X value	Level of Significance
1.	Age	0.44	No Significant
2.	Sex	3.91	No Significant
3.	No. of Siblings	10.88	No Significant
4.	Type of Family	37.12	**Significant**
5.	Area of Residence	1375.026	**Significant**
6.	Occupation of parents	1.56	No Significant
7.	Socioeconomic Status	0.58	No Significant
8.	Education of Parent	157.31	**Significant**
Extraneous variables			
1.	**Type of Delivery**	**81.76**	**Significant**
2.	**Birth Complication**	**1.427**	No Significant
3.	**Nutritional Status**	**10.08**	**Significant**

Part 2: Dyscalculia

Table 4 shows that application of test among primary school students in Dyscalculia having significance in occupation of parents and birth complication. Does not having any significance with Age, Sex, No. of Siblings, Type of Family, Area of Residence, Socioeconomic Status, Education of Parents Type of Delivery and Nutrition Status according to π^2 test ($p<0.05$) were found statically significant level.

Table 4. Description of socio demographic profile of primary school students in Dyscalculia having significance.

S.N.	Demographic Variable	X value	Level of Significance
1.	Age	1.45	No Significant
2.	Sex	0.28	No Significant
3.	No. of Siblings	1.30	No Significant
4.	Type of Family	2.27	No Significant

S.N.	Demographic Variable	X value	Level of Significance
5.	Area of Residence	0.11	No Significant
6.	Occupation of parents	40.624	**Significant**
7.	Socioeconomic Status	4.84	No Significant
8.	Education of Parent	5.06	No Significant
Extraneous variables			
1.	Type of Delivery	4.82	No Significant
2.	Birth Complication	21.543	**Significant**
3.	Nutritional Status	5.95	No Significant

DISCUSSION

This article focuses on analyzing and interpreting the results obtained from the study. The data collected comprised a master sheet, and both descriptive and inferential statistical methods were utilized for analysis. Findings revealed the following: The findings of the study show that maximum mean of dysgraphia is 1.3, Median is 1, Standard Deviation is 0.48305. The dyscalculia shows maximum mean is 1.3, Median is 1, Standard Deviation is 0.48305 [6–10].

CONCLUSION

A learning disability (LD) is defined as a state where there is arrested or incomplete mental development characterized by substantial impairments in intelligence and social functioning. Learning difficulties refer to brain conditions that impede the comprehension or processing of information. Findings of the study showed that majority students 60% from total samples having specific learning difficulties.

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