# Review Of Research

ACADEMIC ACHIEVEMENT DIFFERENTIALS OF CHILDREN WITH AND WITHOUT LEARNING DISABILITIES

Abstract:-

Learning disabilities is a complex condition to understand despite the fact that its prevalence is very high. It has been rightly labeled as a 'hidden handicap' because the symptoms are neither easily visible nor easy to decipher. One of the characteristic features of individuals (especially students) is the marked discrepancy between their ability and performance. In the present paper, the researcher re-emphasizes and re-establishes this fact by comparing the academic achievement of children with learning disabilities (LD) and children without learning disabilities (NLD).
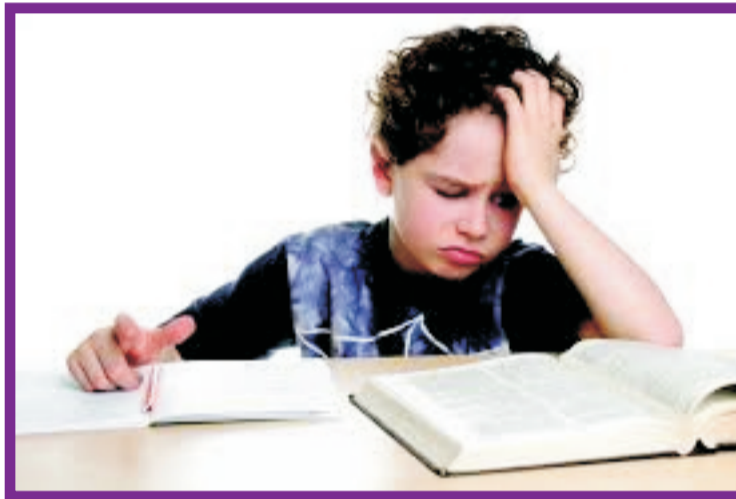
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INTRODUCTION

It's been more than six decades that the concept and the condition of learning disabilities was brought to the attention of the public and the professionals, but even today it creates a lot of confusion. And, why it should not? 'Learning disability' is a complex phenomenon to understand!

National Joint Committee on Learning Disabilities (1983) defines learning disabilities as:

"…a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g., cultural differences, insufficient / inappropriate instruction, psychological factors), it is not the direct result of those conditions or influences."

What most distinguishes learning disabilities from other disabilities is perhaps their invisible and seemingly benign character. A learning disability is present in a normally developing child with a normal intelligence (Reid, 1988).

Learning disabilities can be divided into three broad categories and each of these categories includes a number of more specific disorders:

(A) Developmental speech and language disorders (Developmental articulation disorder; Developmental expressive language disorder; Developmental receptive language disorder)
(B) Academic skills disorders (Developmental reading disorder; Developmental writing disorder; Developmental arithmetic disorder)
(C) "Other," a catch-all that includes certain coordination disorders and learning handicaps not covered by the other terms (such as "motor skills disorders" and "specific developmental disorders not otherwise specified)

In other words, learning disabilities refers to a variety of disorders that affect the acquisition, retention, understanding, organization or use of verbal and/or non-verbal information. Differently stated, the child with LD has average or above average intelligence, adequate sensory acuity, but is achieving considerably less than a composite of his intelligence, age, and educational ability would predict.

Unlike other disabilities, such as paralysis or blindness, a learning disability (LD) is a hidden handicap. A learning disability doesn't disfigure or leave visible signs that would invite others to be understanding or offer support. Moreover, as a primarily academic problem, learning disabilities are often not manifested until the school years.

Learning disabilities can be lifelong conditions that, in some cases, affect many parts of a person's life: school or work, daily routines, family life, and sometimes even friendships and lay. In some people, many overlapping learning disabilities may be apparent. Other people may have a single, isolated learning problem that has little impact on other areas of their lives.
Learning disabilities typically result in underachievement in academic work (Winzer, 1990). The child with LD exhibits an educationally significant discrepancy between apparent capacity and functioning (Bateman, 1964). Academic underachievement is often compounded by excessive motor activity or attention deficits (Mercer, 1986; Santrock & Yussen, 1990).

The educational achievement and performance play a crucial role in determining the status of the individuals in the society. In a study, it was found that the children with learning disabilities have significantly lower overall self-esteem as compared to their peers (children without learning disabilities). This lower self-esteem may be a result of their inability to perform the tasks as others (their peers) do (Kaur, 2014).

The present paper discusses the academic achievement of children with learning disabilities (LD) vis-à-vis children without learning disabilities (NLD) across the levels of intelligence.

OBJECTIVES:

1. To study mean differentials between children with and without learning disabilities.
2. To study whether learning disabilities and academic achievement are independent (or unrelated).
3. To study gender differentials on academic achievement.

DELIMITATIONS:

1. The sample for the study was selected from Chandigarh city only.
2. The sample comprised of 6th class students only.
3. Academic achievement was not measured through any standardized tool; rather school records were accessed to obtain measures of students' academic achievement.
4. Since by definition, LDs possess average or above average intelligence, the study/comparison across levels of intelligence does not have any below average intelligence group for LDs and therefore no matching group of below average intelligence group of NLDs.

METHODOLOGY

Design: The present study is descriptive survey research intended to study academic achievement differentials of children with and without learning disabilities (LD and NLD) across the levels of intelligence (average intelligence; above average intelligence; and high intelligence).

SAMPLE AND SAMPLING:

For the purpose of sample collection, multistage randomized sampling technique combined with matching was applied. An initial sample of 725 children studying in 6th class was selected. These children were administered Diagnostic Test of Learning Disability (DTLD) and Raven's Standard Progressive Matrices (SPM). Out of the initial sample of 725 children, children with learning disability (LD) were identified (on the basis of DTLD) and categorized (on the basis of their intelligence scores given by SPM). The children without learning disabilities (NLD) were matched with the LD on the basis of intelligence scores; gender; class and school. The final sample, therefore, comprised of 98 LD and 98 NLD. Out of 98 LD, 46 were in the average intelligence category (LD_{AI} = 46); 33 in the above average intelligence category (LD_{AAI} = 33) and 19 in the high intelligence category (LD_{HI} = 19). Similarly, out of 98 NLD, 46 were in the average intelligence category (NLD_{AI} = 46); 33 in the above average intelligence category (NLD_{AAI} = 33) and 19 in the high intelligence category (NLD_{HI} = 19).

TOOLS USED:

1. Diagnostic Test of Learning Disability (DTLD) by Swarup and Mehta (1993).
2. Standard Progressive Matrices (SPM) by Raven, Raven and Court (2000).
3. Information on academic achievement was obtained from the school records.

STATISTICAL ANALYSIS:

1. Descriptive analysis: Mean; Standard Deviation
2. Inferential analysis: Two-tailed t-test and chi-square (?2)

RESULTS AND DISCUSSIONS:

$H_o 1$: There exist no significant differences on Academic Achievement between children with learning disabilities (LD) and children without learning disabilities (NLD) across the levels of intelligence.

Table 1: Means; SDs; and t-values on Academic Achievement for LD and NLD

Categories & N	M_{LD}	M_{NLD}	SD_{LD}	SD_{NLD}	df	t	Remarks
LD_{AI} = 46 & NLD_{AI} = 46	50.75	60.72	11.17	12.95	90	3.948	Significant at 0.01 level
LD_{AAI} = 33 & NLD_{AAI} = 33	56.83	64.7	13.52	12.19	64	2.485	Significant at 0.05 level
LD_{HI} = 19 & NLD_{HI} = 19	59.07	74.4	14.81	14.7	36	3.201	Significant at 0.01 level
LD_T = 98 & NLD_T = 98	54.41	64.71	13.09	13.89	194	5.338	Significant at 0.01 level

Note: LD_{AI} & NLD_{AI} :– LD and NLD groups of Average Intelligence
LD_{AAI} & NLD_{AAI} :– LD and NLD groups of Above Average Intelligence
LD_{HI} & NLD_{HI} :– LD and NLD groups of High Intelligence
LD_T & NLD_T :- Total sample of LDs and NLDs

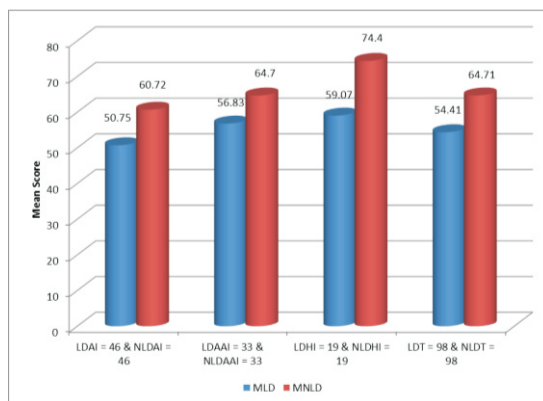**Figure 1: Means on Academic Achievement for LD and NLD groups**

Table 1 gives the mean differentials between LD and NLD on academic achievement. The mean differentials (t-values) were significant (i) between NLD_{AI} and LD_{AI} at 0.01 level; (ii) between NLD_{AAI} and LD_{AAI} at 0.05 level; (iii) between NLD_{HI} and LD_{HI} at 0.01 level; and (iv) between NLD_T and LD_T at 0.01 level.

Therefore, the null hypothesis stating *'There exist no significant differences on Academic Achievement between children with learning disabilities (LD) and children without learning disabilities (NLD) across the levels of intelligence'*, is rejected.

Further, it is implied that the mean academic achievement score of LDs (total as well as across intelligence groups) is significantly lower than that of the NLDs (total as well as across intelligence groups).

H_O2: Learning Disabilities and Academic Achievement (categorized in Divisions) are independent or unrelated.

Table 2a: Academic achievement (Divisions) of LD (Total=98; AI=46; AAI=33 & HI=19) and NLD (Total=98; AI=46; AAI=33 & HI=19)

	1st Div		2nd Div		3rd Div	
	LD	NLD	LD	NLD	LD	NLD
AI	10 (21.74%)	22 (47.83%)	12 (26.09%)	13 (28.26%)	24 (52.17%)	11 (23.91%)
AAI	12 (36.36%)	20 (60.61%)	10 (30.30%)	12 (36.36%)	11 (33.33%)	1 (3.03%)
HI	8 (42.11%)	15 (78.95%)	6 (31.58%)	2 (10.53%)	5 (26.32%)	2 (10.53%)
Total	30	57	28	27	40	14

Note: 1st Division: – Scores 60% or above
2nd Division: – Scores above   50% but below 60%
3rd Division: – Scores below 50%

Table 2b: $\chi2$ (Chi-square) for Academic Achievement (Divisions) of LD and NLD

	1st Div	2nd Div	3rd Div	$\chi2$	Remarks
LD	30	28	40	20.92	Significant at 0.01 level
NLD	57	27	14		

Figure 2: Show percentage of LD and NLD (of AI, AAI and HI) securing 1st Division
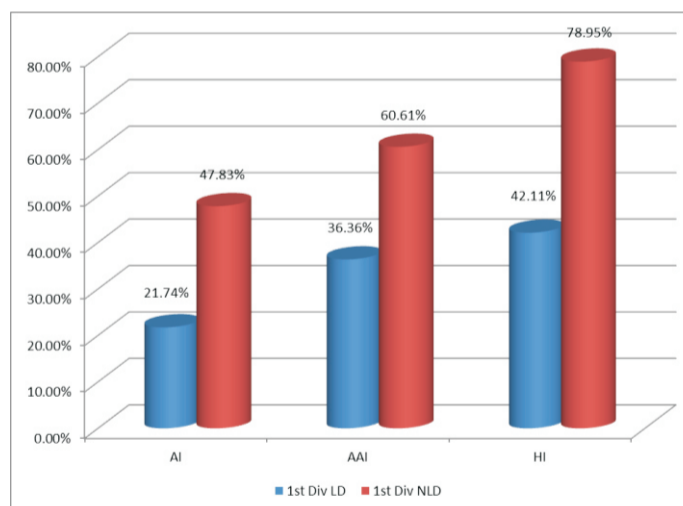
Tables 2a and 2b show that in the average intelligent LD category (i.e., LD_{AI}) there are only 10 (21.74%) children having 1st division as compared to NLD_{AI} of which 22 (47.83%) children have 1st division. Similarly, only 12 LD_{AAI} (i.e., 36.36%) have 1st division as compared to 20 NLD_{AAI} (i.e., 60.61%) who have 1st division. And, only 8 LD_{HI} (i.e., 42.11%) have 1st division as compared 15 NLD_{HI} (i.e., 78.95%) who have 1st division. On the whole, only 30 LD out of total 98 secured 1st division as compared to

57 NLD (also out of total 98) who secured 1st division.

x^2 (Chi-square) was also found to be significant at 0.01 level leading to the rejection of null hypothesis stating 'Learning Disabilities and Academic Achievement (categorized in Divisions) are independent or unrelated'. It may thus be interpreted that learning disabilities do lead to lower academic achievement.

H_o3: There exist no significant gender differentials on academic achievement.

Table 3: Means; SDs and t-value on Academic Achievement for
LD Males (N =55) and LD Females (N =43)

	M_{LD-M}	M_{LD-F}	SD_{LD-M}	SD_{LD-F}	df	t	Remarks
Academic Achievement	50.53	59.38	12.1	12.75	96	3.506	Significant at 0.01 level

Note: M_{LD-M} & SD_{LD-M}: - M (mean) and SD (standard deviation) of male LDs
M_{LD-F} & SD_{LD-F}: - M (mean) and SD (standard deviation) of female Lds

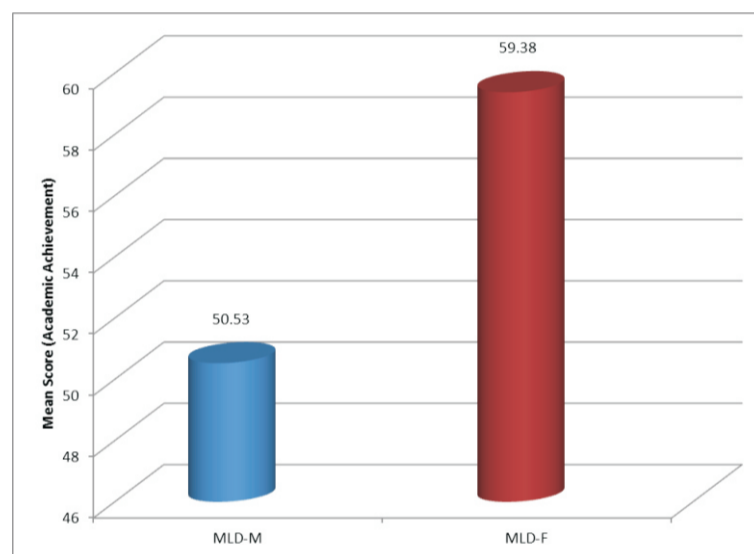**Figure 3: Means on Academic Achievement for LD Males (N =55) and LD Females (N =43)**

Table 3 gives the gender mean differentials on academic achievement between LD males (LD_M=55) and LD females (LD_F=43).

The mean differential (t-value) between LD_M and LD_F on academic achievement is significant at 0.01 level of confidence, thereby leading to the rejection of the null hypothesis stating *'There exist no significant gender differentials on academic achievement'.* Further, it may be concluded that the mean score of LD males is significantly lower as compared to the mean score of LD females on academic achievement.

CONCLUSIONS:

Review on learning disability show that this condition – in one or the other form – occurs among all groups, regardless of age, race and income (International Dyslexia Association, 1999). Children with learning disabilities find it difficult to keep pace with the present day cut-throat competition. Each LD child may require specialized teaching methods to learn at an acceptable rate.

As the results of this study indicate, children with learning disabilities (LD) have significantly lower academic achievement as compared to the children without learning disabilities (NLD) even when variables like intelligence, gender, and school were kept constant (through matching). The results also highlight and strengthen the point that LD achieve significantly lower than their potential, i.e., there is marked discrepancy between their ability and achievement, as is evident from their lower achievement despite their higher levels of intelligence.

Also, the gender differentials suggest that boys need comparatively more rigorous intervention and sympathetic accommodation. This should not be taken to mean that female students need less attention, it simply mean that when it comes to learning disabilities, male students are more prone to perform below their potential, and therefore, they demand/need extra effort from the teachers and parents.

It has been established that students with learning disabilities may be benefited through school-based interventions (Elbaum & Vaughn, 2003). Though, these children experience difficulties in

processing the written language, they are often bright, creative, and talented individuals (Yoshimoto, 2000). Now it is time to focus on strengths of learning disabled children and effort should be made to help them realize their distinctive potential (West, 1998) instead of looking at them with a frustrating frown.

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