

## **Behavior problems of children with and without learning disability**

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### **ABSTRACT**

Elementary school age is a period of development of creative, fun and independent behavior among children but, at the same time it is a challenging period for children especially in the classroom. Behavior problems among children of this age group are common as they learn to test their limits and assert their independence. One of the reasons for behavior problems among children of this age group are school based and are mainly due to learning difficulty. The learning disability problems do not be identified till the child enters formal schooling. Learning disabilities generally used as 'LD' is a general 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. The present study was conducted to identify behavior problems among children with and without learning difficulty. Teachers rated behavior problems among children using Behaviour Problems Checklist. The study sample were 270 (150 from children without LD and 120 from children with LD) elementary school children in 3rd, 4th and 5th grades selected from Hyderabad, Nellore and Chittoor Districts of united state of Andhra Pradesh representing three regions of the state *i.e.* Rayalaseema. The results showed that majority of children with LD had average intelligence on par with normal achievers and prevalence of learning disability was more among boys than girls in sample students. According to teacher's perception, LD children had more behavior problems in all areas than those without LD. Ordinal position, fathers' education, fathers' occupation, mothers' education and family income have shown significant contribution towards behavior problems of children, which shows that, these variables would be stronger determinants, good predictors for the behavior problems among children as per teachers' perception.

**Key Words :** Children, Learning disability, Behaviour problem, Good predictors

### **INTRODUCTION**

During elementary school age, children learn about the wider world and master improved athletic abilities, participation in games with rules, more logical thought processes, mastery of basic literacy skills, and advances in self-understanding, morality and friendship (Berk, 2003). Children grasp the concepts of space and time in more logical, practical ways. They gain a better understanding of cause and effect, and of calendar time. At this stage, children are eager to learn and accomplish more complex skills like reading, writing, telling time and so on.

Elementary school children are a unique group. They are creative, fun and independent, but

they can be challenging, especially in the classroom. Behavior problems in school with this age group are common as they learn to test their limits and assert their independence. Behavior problems can develop into big issues for children in elementary school. Symptomatic expression of emotional or interpersonal maladjustment especially in children (as by nail-biting, enuresis, negativism, or by overt hostile or antisocial acts).

During this stage students can engage in problematic behaviors because of health problems, personal or family problems, adjustment or developmental issues (e.g., “immaturity” or self-esteem issues), or general academic difficulties. Generally behavior problems are school based and are mainly due to learning difficulty. These problems do not be identified till the child enters formal schooling.

A learning disability is a neurological disorder that affects the brain’s ability to receive, process, store, and respond to information. “LD” does not stand for a single disorder. It is a term that refers to a group of disorders.

Learning disabilities generally used as ‘LD’ is a general 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.

#### **Classification of learning disabilities :**

Learning Disabilities can be classified as follows :

**Dyslexia:** It is a condition where child has difficulty in reading, writing, spelling, speaking etc.

**Dyscalculia:** The child has problem in doing maths problems, understanding time, using money

**Dysgraphia:** In this Dysgraphia child will have problems with handwriting, spelling, organizing ideas etc.

**Dyspraxia (Sensory Integration Disorder):** The child has Problem with eye–hand coordination, balance, manual dexterity etc.

**Dysphasia/Aphasia:** In this condition the child has Problem with understanding spoken language, poor reading comprehension.

**Auditory Processing Disorder:** The child has difficulty with hearing differences between sounds and also problem with reading, comprehension, language.

**Visual Processing Disorder:** In this condition the child has difficulty in interpreting visual information, like maps, charts, symbols, pictures.

Vijayalakshmi *et al.* (2011) reported that the prevalence of Learning Disability is at the higher side of previous estimations in India.

Specific Learning Disability affects 5-15 per cent of school going children (Sunil *et al.*, 2011)

#### **Objectives :**

1. To identify the sample children with learning disability using Identification of Learning Disability Inventory (LDDI) (Hammill and Bryant, 1998).
2. To assess the behavior problems of children with and without learning disability
3. To find out the determinants of outcome variables

## **METHODOLOGY**

#### **Sample :**

The study sample were elementary school children selected from Hyderabad, Nellore and Chittoor Districts of united state of Andhra Pradesh representing three regions of the state i.e. Rayalaseema, Costal region and Telangana. Five revenue divisions were selected randomly from each District and total 15 revenue divisions among three districts were selected. Within each revenue

division 4 Government schools were selected randomly. The sample were identified using purposive and stratified random sampling techniques. In the first stage with the help of school teacher students in 3rd, 4th and 5th grades who were backward in academics were administered with LDDI inventory. The sample children's IQ was measured using Ravens Progressive Matrices Test by following the standard procedure for administration of the test, in school premises in a separate room with comfortable seating position for the child to perform the test. Teachers of children with and without Learning Disabilities were administered with the Check list of Behavior Problems.

#### **Tools and Materials for Research :**

1. Learning Disability Diagnostic Inventory – (Developed by Hammill and Bryant, 1998)
2. Standard Raven's Progressive Matrices (SPM) Test (Developed by Raven, 1976).
3. Behavior Problems Check List (Developed by Anuradha and Bharathi, 2004 and adapted for present study)

The Tool developed for the present investigation were developed by following standard procedures for development of tools. The reliability and validity were satisfactory.

## **RESULTS AND DISCUSSION**

The sample for children with Learning Disability (LD) were selected using Learning Disability Diagnosis Inventory (LDDI, Hammill and Bryan 1998). Thus, 40 children (33.3 %) from 3<sup>rd</sup> grade, 45 children (37.5 %) from 4<sup>th</sup> grade and 35 children (29.2 %) from 5<sup>th</sup> grade, constituted the sample. Nearly an equal number of children without learning disability were identified from same classes to enable comparison (33.3 per cent from 3<sup>rd</sup> grade, 38.7 per cent from 4<sup>th</sup> grade and 28 per cent from 5<sup>th</sup> grade.

Among the samples who were identified as learning disabled, there were 64.22 per cent of boys and 35.8 per cent of girls. From the data it was evident that comparatively the prevalence of learning disability was more among boys than girls. These findings were in line with that of Smith (2004), who found that boys were 1.5 times more likely to be identified as LD than girls. Eme (1992), also reported that gender ratio in LD is 3.5 to 5 males for one female.

With regard to birth order of children, majority of normal achievers (50 %) were second born, next to it 40.7 per cent were first born and very few (9.3 %) sample children without LD had birth order of third and above. With regard to sample children with LD majority (42.5 %) were first born followed by second (35 %) and later born (27 %).

Studies have shown that with increase in number of siblings there is a decrease in number of positive cases of LD. Akhil and Tushar (2013) also reported that LD was more prevalent among first born children than later born.

Children's IQ was measured using Raven's Progressive Matrices Test (Raven, 1976). From the Table 1, it is clear that majority of sample children (62 %) without LD (Normal Achievers) had average intelligence quotient. Twenty per cent of NA fell under above average and an equal per cent (18 %) fell under below average IQ category.

It is interesting to note that on par with normal achievers majority of children with LD (61.6 %) had average intelligence and 23.3 per cent had below average intelligence. 15 per cent of children with LD were found to have above average intelligence. Miglani *et al.* (2011) also found that there was no significant difference in intelligence among children with learning disability and non-learning disability.

<b>Table 1 : Distribution of sample children with and without LD according to child variables (Percentages in parentheses)*</b>						
Sr. No.	Variables	Children without LD (Normal achievers)	Children with LD			Grand total
			Attending SE	Not attending SE	Total children with LD	
1.	<b>Grade</b>					
	3 <sup>rd</sup>	50 (33.3)	19 (31.7)	21 (35.0)	40 (33.3)	90 (33.3)
	4 <sup>th</sup>	58 (38.7)	23 (38.3)	22 (36.7)	45 (37.5)	103 (38.1)
	5 <sup>th</sup>	42 (28.0)	18 (30.0)	17 (28.3)	35 (29.2)	77 (28.5)
2.	<b>Gender</b>					
	Boys	70 (46.7)	41 (68.3)	36 (60.0)	77 (64.2)	147 (54.4)
	Girls	80 (53.3)	19 (31.7)	24 (40.0)	43 (35.8)	123 (45.6)
	Total	150	60	60	120	
3.	<b>Age</b>					
	8 Years	43 (28.7)	15 (25.0)	20 (33.3)	35 (29.2)	78 (28.9)
	9 Years	37 (24.7)	15 (25.0)	20 (33.3)	35 (29.2)	72 (26.7)
	10 Years	39 (26.0)	15 (25.0)	13 (21.7)	28 (23.3)	67 (24.8)
	11 Years	31 (20.7)	15 (25.0)	7 (11.7)	22 (18.3)	53 (19.6)
4.	<b>Birth order</b>					
	First	61 (40.7)	8 (13.3)	43 (71.1)	51 (42.5)	112 (41.5)
	Second	75 (50.0)	26 (43.3)	16 (26.7)	42 (35)	117 (43.3)
	Third/Fourth	14 (9.3)	26 (43.3)	1 (1.7)	27 (22.5)	41 (15.2)
5.	<b>IQ</b>					
	Below average	27 (18.0)	22 (36.6)	6 (10.0)	28 (23.3)	55 (20.4)
	Average	93 (62.0)	31 (51.6)	43 (71.7)	74 (61.6)	167 (61.8)
	Above average	30 (20.0)	7 (11.6)	11 (18.3)	18 (15.0)	48 (17.7)

An observation of Table 2 shows that the majority of fathers (52.7 %) of children without LD had education up to 10<sup>th</sup> standard and had occupation of business and Government employment. Majority of fathers of children with LD (42.5 %) had Intermediate and above education and 36.7 per cent were illiterates and with regard to occupation 36.7 per cent from agriculture back ground and other occupations like drivers, tailors etc.

<b>Table 2 : Distribution of sample children with and without LD according to fathers' education and occupation (Percentage in parenthesis)</b>					
Sr. No.	Parental variables	Children without LD (Normal achievers)	Children with LD		
			Attending SE	Not attending SE	Total children with LD
1.	<b>Fathers' education</b>				
	Illiterate	29 (19.3)	25 (41.7)	19 (31.7)	44 (36.67)
	Up to 10 <sup>th</sup> Class	79 (52.7)	22 (36.7)	3 (5.0)	25 (20.8)
	Intermediate and above	42 (28.0)	13 (21.7)	38 (63.3)	51 (42.5)
2.	<b>Fathers' occupation</b>				
	Daily labour	30 (20.0)	19 (31.7)	4 (6.7)	23 (19.17)
	Govt./private employee	33 (22.0)	11 (18.3)	16 (26.7)	27 (22.5)
	Business	55 (36.7)	14 (23.3)	12 (20.0)	26 (21.67)
	Agriculture and others	32 (21.3)	16 (26.7)	28 (46.7)	44 (36.7)

From Table 3, it is known that majority of mothers of children without LD (67.3 %) had education up to 10th standard whereas, majority of mothers of children with LD (36.7 %) were illiterates. With regard to occupation majority of mothers of children with LD and without LD were home makers and next to it, mothers of children of LD (13.3 %) were daily labours.

**Table 3: Distribution of sample according to mothers' education and occupation**

Sr. No.	Variables	Children without LD (Normal Achievers)	Children with LD		Total children with LD	Grand total
			Attending SE	Not attending SE		
1.	<b>Mothers' education</b>					
	Illiterate	21 (14.0)	30 (50.0)	14 (23.3)	44 (36.7)	65 (24.1)
	Up to 10 <sup>th</sup> class	101 (67.3)	24 (40.0)	9 (15.0)	33 (27.5)	134 (49.6)
	Intermediate and above	28 (18.7)	6 (10.0)	37 (61.7)	43 (35.8)	71 (26.3)
2.	<b>Mothers' occupation</b>					
	House wife	119 (79.3)	32 (53.3)	36 (60.0)	68 (56.67)	187 (69.3)
	Daily labour	4 (2.7)	12 (20.0)	4 (6.7)	16 (13.3)	20 (7.4)
	Govt. /private employee	11 (7.3)	8 (13.3)	8 (13.3)	16 (13.3)	27 (10.0)
	Business	6 (4.0)	5 (8.3)	6 (10.0)	11 (9.17)	17 (6.3)
	Agriculture/others	10 (6.7)	3 (5.0)	6 (10.0)	9 (7.5)	19 (7.0)

Paul *et al.* (1990), also reported that mothers' low educational qualification and low occupational status (as daily labour) were significant risk factor for learning disability among children.

From Table 4 it is evident that majority of sample children, both children without LD (90 %) and children with LD (88.3 %) were from nuclear families. 10 per cent were from joint families and very few were from extended families. In majority of the families (89.3 per cent without LD and 85.83 per cent with LD), the number of family members were ranged from 4-6 members.

**Table 4 : Distribution of sample children with and without LD according to family variables**

Sr. No.	Family variables	Children without LD (Normal achievers)	Children with LD		Total children with LD
			Attending SE	Not attending SE	
1.	<b>Type of family</b>				
	Nuclear	135 (90.0)	51 (85.0)	55 (91.7)	106 (88.3)
	Joint	15 (10.0)	7 (11.7)	5 (8.3)	12 (10.0)
	Extended	0 (0.0)	2 (3.3)	0 (0.0)	2 (1.67)
2.	<b>Family size</b>				
	Up to 3 members	12 (8.0)	2 (3.3)	1 (1.7)	3 (2.5)
	4-6 members	134 (89.3)	45 (75.0)	58 (96.7)	103 (85.83)
	7 and above	4 (2.7)	13 (21.7)	1 (1.7)	14 (11.67)
3.	<b>Income level</b>				
	Rs.5000-10000/-	18 (12.0)	15 (25.0)	1 (1.7)	16 (13.33)
	Rs 10000-15000/-	107 (71.3)	29 (48.3)	18 (30.0)	47 (39.17)
	Above Rs 15000/-	25 (16.7)	16 (26.7)	41 (68.3)	57 (47.5)

This clearly shows the changing Indian family structure of moving from joint to nuclear families.

With regard to monthly income, majority of normal achievers (71.3 %) were from families whose monthly income was Rs. 10000-15000/-. Among children with LD majority 47.5 per cent were from families whose monthly income was above Rs. 15000/- and 39.17 per cent were from

families with income range of Rs 10,000 to 15,000/-. The sample were selected from government schools in all three districts and hence, majority of the sample were from middle income group.

Venugopal and Raju (1988) also reported that children belonging to middle class families represented more learning disabilities.

To assess whether children with and without LD differ in behavior problems t-test was conducted. The t-values for all areas of problems viz, emotional, home, academic and social were highly significant which indicates that children with and without LD differed significantly in exhibiting behavior problems. Comparatively teachers perceived more problems for children with LD than those without LD.

**Table 5: Mean scores of behavior problems perceived by teachers'**

Sr. No.	Areas of problems	Normal achievers (Without LD)		Children with LD		t-value	sig
		Mean	SD	Mean	SD		
1.	Emotional	13.36	4.057	21.69	4.83	11.89	.000
2.	Home	12.71	4.036	22.17	5.67	15.47	.000
3.	Academic	13.39	4.458	22.90	4.59	14.71	.000
4.	Social	12.57	4.017	20.58	5.67	15.72	.000
Total		52.04	13.780	87.31	16.26	21.21	.000

Reported studies on behavior problems of children with LD and without LD have shown that comparatively children with LD have more behavior problems than children without LD (Stephanie and David, 1986, Juvonen and George, 1992, Lardieri *et al.*, 2000, James, 2002 and Michaels, 2004). Paul (1990), also reported that students of LD have more behavior problems as per teacher's rating.

**Determinants of behavior problems of sample children :**

Multiple linear regression analysis was constructed to assess the major determinants of behavior problems of sample children. Table 6, 7 and 8, show the linear regression model and ANOVA of the regression analysis. The f value was significant (p<.000) which indicates the adequacy of the model.

Table 8, shows that among the selected independent variables, ordinal position, fathers' education, fathers' occupation, mothers' education and family income have shown significant contribution towards behavior problems of children. The f values show that, these variables would be stronger

**Table 6 : Linear regression model**

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.692 <sup>a</sup>	.479	.456	16.982

**Table 7 : ANOVA**

Model	Sum of squares	Df	Mean square	f	Sig.
1. Regression	68280.416	11	6207.311	21.525	.000
Residual	74400.624	258	288.375		
Total		269			

a. Dependent Variable: Teachers' perception of Students' Behaviour Problems Total Score

b. Predictors: (Constant), Gender, Age, Ordinal position, Class, IQ, Father education, Father occupation, Mother education, Mother occupation, Type of family, Income.

Table 8 : Coefficients					
Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	102.023	13.636		7.482	.000
Gender	1.055	1.499	.038	.704	.482
Age	-1.847	1.372	-.088	-1.347	.179
Ordinal position	-3.953	2.206	.086	-1.792	.074
Class	1.468	1.952	.050	.752	.453
IQ	1.094	1.717	.034	.637	.525
Father education	-2.275	.820	-.163	-2.776	.006
Occupation	1.437	.381	.182	3.775	.000
Mother education	-2.349	.387	-.346	-6.064	.000
Occupation	1.665	.374	1.375	1.118	.523
Type of family	-.461	3.176	-.007	-.145	.885
Income	6.318	1.110	.343	5.691	.000

a. Dependent Variable: Teachers Perception of Students Behaviour Problems Total

determinants, good predictors for the behavior problems among children as per teachers' perception. Rezique (1983), found that mother's educational level influenced children's academic achievement. It was reported that parents with poor educational levels may lack motivation and academic ambition, unable to help in their children's schoolwork and may have a low index of suspicion of their learning disabilities, delaying diagnosis and remedial teaching. Thus, if mothers were educated, they can identify the children learning disabilities at an early age and can help them to get remedial teaching. The data showed that first born children had more behavior problems than later born children.

### Conclusion :

- Comparatively the prevalence of learning disability was more among boys than girls in sample students.
- Majority of normal achievers (50 %) were second born and with regard to children with LD majority (42.5 %) were first born.
- Majority of children with LD had average intelligence on par with normal achievers.
- Majority of parents of LD children were illiterates and had low occupational status and were from middle income group.
- Majority of sample children, both normal achievers (90 %) and children with LD (88.3 %) were from nuclear families.
- Comparatively children with LD had more behavior problems in all areas than those without LD according to teacher's perception.
- Children with and without LD differed significantly in all areas of behavior problems
- Comparatively teachers perceived more problems for children with LD than those without LD.

Among the selected independent variables ordinal position, fathers' education, fathers' occupation, mothers' education and family income have shown significant contribution towards behavior problems of children, which shows that, these variables would be stronger determinants, good predictors for the behavior problems among children as per teachers' perception.

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