

Learning disability and academic backwardness among rural school children

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■ **ABSTRACT** : The present study was conducted to assess the incidence of learning disability among academically poor rural school children in Ludhiana district. The study was based upon the sample of 100 children. The subjects for the sample were drawn randomly from four rural government schools located on Block I of Ludhiana district. The standard progressive matrices (Raven, 1969) was used to screen the children with poor intellectual abilities and A diagnostic test of learning disability (Swarup and Mehta, 2005) was used to assess the incidence of learning disability. The incidence of learning disability was found to be 11.90 per cent. Out of various dimensions figure constancy (92.86%), figure ground perception (69.05%) and eye-hand co-ordination (61.90%) were found to be the strongest areas of perception among academically poor children and expressive language was found to be severely affected in majority of children.

■ **KEY WORDS** : Learning disability, Academic performance

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Prevalence of learning difficulties is one of the factors responsible for poor academic achievement in children. Chadha (2004a) explained that children with learning difficulties have problems in all areas of learning and development. In school, learning is significantly influenced by reading, writing skills and ability of the child to perform mathematical operations. In other words, language and mathematical abilities determine a child's success in school performance. Children can have problem in any of these areas or he/she can feel difficulty in more than one area. Children with difficulties in reading, writing and mathematical calculations are known as learning disabled children. Learning disability is defined as a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. Anjana (2005) reported the prevalence rate of learning disability to be 8.68 per cent among pre-school children. It is a disorder in which the child has difficulty in learning or assimilating information that is easy for other children. These problems in learning may happen to

children who are as intelligent, or even more intelligent than most children of the same age. Generally, these children also do not show any problem in seeing and hearing. There is no serious brain damage. Moreover, they also get the same opportunity to learn in the class like other children.

These children may also be receiving enough environmental or emotional support. Their difficulty in learning is due to a problem in that part of the brain, which is involved in processing or understanding information/things that are happening around them. However, scholastic failure is one of the telling signs of learning disability since these children, despite being intelligent, are unable to process information in a way that is required for good academic performance.

These problems may be attributed to a variety of factors e.g. poor teaching methods, inability of the teacher to make math interesting, problems in memory, reading, language and logical thinking. Regardless of the cause of these problems, the teacher should use joyful teaching methods (Chadha, 2004b). Therefore, keeping these factors in view the present study was planned with the following objectives to assess the incidence of learning disability among academically poor

rural school children and to study the strong and weak areas of various dimensions of learning disability among academically poor children.

■ RESEARCH METHODS

The study was conducted in rural areas of Ludhiana district in 2010. From block I of Ludhiana district, only those villages were enlisted where Government High/Senior Secondary Schools were available. From these purposively selected villages, the four Government High/Senior Secondary Schools were randomly selected. The sample size consisted of 100 children. The Standard Progressive Matrices (Raven, 1969) was used to screen children with poor intellectual abilities. A diagnostic test of learning disability (Swarup and Mehta, 2005) was used to identify those children who experience learning problems because of learning disability and it was applied on those children who were found to have average and above average intellectual abilities. Since, it is a performance test and was to be used in rural schools, the test was translated into Punjabi. The scale consisted of ten subtests covering different areas, each representing a basic psychological process. A deficit in any area or areas or a combination of any indicated presence of learning problem. Each item of the subtest was scored separately as per the instructions given in the manual. The total score of each area projected severity of the problem, a child had in that particular area.

■ RESEARCH FINDINGS AND DISCUSSION

Table 1 elucidates per cent distribution of overall

incidence of learning disability among academically poor children. It was found that learning disability was not present in majority (88.10%) of academically poor children. Only 11.90 per cent of children were found to be learning disabled. The number of children without learning disability was found significantly ($p \leq 0.05$) higher than their counterparts with learning disability. The results indicated that the incidence of learning disability among rural academically poor children to be 11.90 per cent. The results of the present study were in line with the results of Chadha (2004a) who reported that on an average 15 per cent of children are found to have one or other kinds of learning disability.

Table 2 shows the per cent distribution of academically poor children across various dimensions of learning disability. The results revealed that figure constancy (92.86%) was found to be the strongest area among academically poor children. This depicts that children were well conserved with the important perceptual details about shapes, graphics, and letters, which are required for reading or writing activity. Figure ground perception (69.05%) was another area that was found to be strong in these children *i.e.* they were able to filter out the relevant stimuli from the irrelevant one. It is the ability to attend to only those stimuli which require one's attention at a given period. The child's inability in this area leads to failure for understanding the task at hand and results in either a disorganized performance or academic failure. It helps children in picking out and in focusing attention on a specific object from surrounding objects. Similarly Eye-hand co-ordination was also found to be strong area among these children (61.90%) that indicated that these children were good in co-

Sr. No.	Incidence of learning disability	Frequency	Percentage
1.	Yes	5	11.90
2.	No	37	88.10

Z=5.555*

* indicates significance of value at $P \leq 0.05$

Sr. No.	Dimensions	Levels of dimensions			
		Severe	Moderate	Mild	Strong
1.	Eye hand coordination	0 (0.00)	3 (7.14)	13 (30.95)	26 (61.90)
2.	Figure ground perception	1 (2.38)	4 (9.52)	8 (19.05)	29 (69.05)
3.	Figure constancy	1 (2.38)	0 (0.00)	2 (4.76)	39 (92.86)
4.	Position-in space	3 (7.14)	22 (52.38)	14 (33.33)	3 (7.14)
5.	Spatial relations	4 (9.52)	9 (21.43)	23 (54.76)	6 (14.29)
6.	Auditory perception	4 (9.52)	8 (19.05)	22 (52.38)	8 (19.05)
7.	Cognitive abilities	12 (28.57)	15 (35.71)	13 (30.95)	2 (4.76)
8.	Memory	8 (19.05)	7 (16.67)	22 (52.38)	5 (11.90)
9.	Receptive language	7 (16.67)	13 (30.95)	20 (47.62)	2 (4.76)
10.	Expressive language	25 (59.52)	10 (23.81)	4 (9.52)	3 (7.14)

Figures in parentheses indicate percentages

ordinating vision with the movement of their hands for effective use.

Further Table 2 depicts that children showed mild problem in the area of spatial relations (54.76%). Spatial relationship is the ability to see the relationship between two or more objects in relation to self and in relation to each other. A child needs adequate spatial relation ability for matching blocks, copying patterns, completing incomplete pictures and also for reading, writing and arithmetic, comprehending graphs, maps etc. A child with problem in the area of spatial relations generally has problem in doing tasks involving directionality and laterality. Problem in this area could be related to poor reading, writing and arithmetic skills being depicted by the selected academically poor children in the present study. Children also showed mild problems in the areas of memory (52.38 %), auditory perception (52.38% each) and receptive language (47.62%). Memory is necessary facilitator for almost all learning. It determines the extent to which a child is capable of some incidental learning by retrieving relevant information at an appropriate time. It helps the child to remember the sound-symbol association, basic rules of language and sequence of mathematical operations.

Auditory perception refers to an ability to provide meaning to auditory stimuli and its deficiency leads to problems in the area of auditory sequencing, phonemic analysis, segmentation and phonemic association. A child having problem in auditory perception tends to have deficits in the area of receptive language as the inability to perceive auditory stimuli correctly, will adversely affect a child's ability to encode the information in a proper way. Moderate problems were seen in the area of position in space in 52.38 per cent of the children. It is the ability to perceive the relationship between the observer and the object in the space *i.e.* of it being, above, below, behind, in front of, next to etc. to the person observing. It is an important ability that helps a child to comprehend a word's position in space when he/she is reading or hearing it for adequate comprehension. Expressive language is the base for most of the learning and helps the child to comprehend the language and this area was found to be severely affected in 59.52 per cent of the children. The results are also in line with the study conducted by Tripathi

and Kar (2008) who reported that children showed high prevalence of language and writing related problems particularly in expression across all classes.

Conclusion:

Incidence of learning disability was found to be 11.90 per cent among academically poor children. Figure constancy (92.86%), figure ground perception (69.05%) and eye-hand co-ordination (61.90%) were found to be the strongest areas of perception among academically poor children. Children showed mild problems in the areas of spatial relations (54.76%) memory (52.38%), auditory perception (52.38%) and receptive language (47.62%). Expressive language was found to be severely affected in majority of children (59.52).

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