



## A STUDY TO ASSESS SCHOLASTIC BACKWARDNESS IN THIRD STANDARD STUDENTS AT AN ASHRAM SCHOOL IN NAVI MUMBAI.

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### ABSTRACT

Overall prevalence of scholastic backwardness was 59.40% when the average of all the skills was taken. 60 (76.92 %) were below average in the reading skill, 34 (43.59 %) students in mathematical calculation skill and 45(57.69 %) students in mathematical problem solving skill. Using Kruskal-Wallis test for Table no.1 and 2, it was found that there was no significant variation in the performance between the students when tested for the skills of 1) basic reading, 2) mathematical calculation and 3) mathematical reasoning with respect to the scores given for the skills.  $Kw=0.03519$ ,  $p=0.9826$ . Using Mann Whitney Test it was observed that there was no significant difference between male and female students,  $U=9.000$ ,  $p=0.5296$  with respect to the performance scale. 59.04% of the students scored below average. Hence there is need to change the way of teaching but no need of any special educator or any special therapy. 59.04% students are scholastically backward but there is no Learning Disability amongst them.

**KEYWORDS:** scholastic backwardness, disadvantaged children, learning disability, reading difficulty, arithmetic difficulty.



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## INTRODUCTION

Academic skills such as reading, writing and arithmetic/numeric are important to a child's success in academics and life. These skills are important for social and economic development

<sup>1</sup> However, learning these skills is difficult for many children and experience significant delays in one or more academic areas. These difficulties of children seriously affect their academic and personal performance along with achievement<sup>2</sup> Scholastic backwardness is being increasingly recognized as one of the important problems in children which is of concern to both parents and teachers alike.<sup>3</sup> A child is regarded as disadvantaged if because of social or cultural factors (e.g. social class or poverty), he comes into school system with knowledge, skills and attitudes which makes adjustment difficult and impedes learning.<sup>4</sup> Viewing scholastic backwardness in terms of poor academic achievement or repeated failure in grades, several Indian school surveys in the past decade have recorded prevalence rates that range between 20 and 50%.<sup>5, 6</sup> Specific associations have been recorded between scholastic difficulties and poor concentration and school absence<sup>7</sup>, poor school functioning<sup>8</sup>, large family size<sup>9</sup>, father's occupational status<sup>10</sup>, and adverse family conditions.<sup>11</sup> Researchers like Blachman et al (1999)<sup>12</sup>, O'Connor et al (2001)<sup>13</sup> and many others have been able to document a variety of specific intervention approaches that yield significantly better outcomes. Also longer and more intense treatments gave stronger effects. Hence a study was carried out to find out the scholastic performance in the school going children of 3<sup>rd</sup> grade in an ASHRAM School at the outskirts of Navi Mumbai. These are disadvantaged children most of them coming from the poor Adivasi Community from the neighboring villages.

### **Aims and Objectives**

1) To find out the scholastic performance in the children in various skills.

2) To compare the performance between male and female students.

Design: A cross sectional study was carried out.

## METHODOLOGY

3 skills i.e., 1) Basic Reading Skills 2) Mathematical calculation and 3) Mathematical Reasoning were assessed to find out the scholastic performance. Early Grade Reading Assessment Scale<sup>14</sup> was used for measurement of Basic Reading Ability. Only 3 tasks were given to the students. They were:

1) Letter Identification-letters of the local language (Marathi) were given, one minute time was given. Students were asked to provide the name or sounds. Total letters read correctly were counted and divided into groups of 10 letters per group, starting from 10 to 100 and the scores were given. (Early Grade Reading Assessment Scale)

2) Oral Reading Fluency with Comprehension. (Paragraph reading) (Early Grade Reading Assessment Scale)

Students were asked to read a small paragraph (local language :Marathi) in the form of a story in one minute time and the total words read correctly in one minute were counted. Total words read correctly were counted and divided into groups of 05 letters per group, starting from 05 to 50 and the scores were allotted.

Later students were asked questions based on the story. 15 seconds time was given to answer the question. Evaluation is done as: 1) Correct 2) Incorrect 3) No response. Each correct answer was given 10 points.

Mathematical Calculation: 1) Addition & Subtraction (with and without units), calculation by providing clues in the form of objects (e.g. Marbles),

2) Calculation by providing clues in the form of 2 different objects (e.g. Red and blue marbles),

3) Mathematical Reasoning: Word Problems were given.

### **Grading Scale**

- 0 (Poor) Child couldn't complete the work with maximum assistance.  
1 (Fair-) Child could complete the work with maximum assistance.  
2 (Fair) Child could complete the work with moderate assistance.  
3 (Fair+) Child could complete the work with minimum assistance.  
4 (Good) Child could complete the work without assistance.

### **Performance Scale**

Total Score	Comment (overall performance)
12	Excellent
10-12	Very Good
8-1	Good
4-8	Average
<4	Below Average

### **Statistical Tests**

Kruskal- Wallis test was applied to find out the variation in between the students performing different learning skill tests to determine learning backwardness. Mann –Whitney test was applied was used to find out the difference between males and females in the learning skills.

## **RESULTS & DISCUSSION**

The study was conducted in the students of 3<sup>rd</sup> standard at an Ashram School in Navi Mumbai. Total 68 students participated in the study. Prior consent was taken from the School Principal for carrying out the study. These students were provided food, accommodation, clothes and free education by the School Administration through the funds provided by government. During holidays and vacation, the students go to their home and meet the parents.

### **Demographic Profile**

**Caste:** 69(88.5%) students of the total 78 students under the study belong to backward caste families. In another study by Saraswati C.Hunshal and V. Gaonkar, it was noticed that

all the children were from backward caste families.<sup>15</sup>

**Family Size:** In our study 59(75.64%) students had total 5 members in the family (mother, father and siblings).12(15.38%) had 4 members in the family. 2(2.56%) had 3 members and 5(6.41%) had only 2 members (single parent due to death of the spouse). Berger et al observed that scholastic performance was affected because of large family size.<sup>9</sup>

### **Literacy of parents**

In the present study,42(53.84%) student's parents were illiterate.32(41.03%) students' parents were studied up to primary education.3 students parents were studied upto secondary education and only one student's parent was studied up to higher secondary. Of the total parents, percentage of fathers who were educated was 30(38.46%) and only 13(16.67%) mothers were literate.

Sarada Devi & Kiran (2002) reported that large family size, low educational status of parents, low parental involvement and low parental encouragement were found to be the major family factors associated with scholastic backwardness.<sup>16</sup>

### **Occupation**

64(82.1%) parents worked in the farms where the employment is not regular.3 (3.85%) parents were in the government sector as class IVemployees.11 (14.10%) parents were unemployed and the relatives were supporting them. Heena Dilshad in her study (2006) observed that 32.0 per cent of the fathers were cultivators, 37.9 per cent of fathers were professionals like doctors and engineers etc. while 24.7 per cent were either elementary/high school teachers or salaried jobs against only 0.5 per cent of mothers. Nobody was unemployed.<sup>17</sup>

### **Addiction Habits of parents**

63 parents were addicted to alcohol (30 parents-mother and father, 33 parents-only fathers were addicted to alcohol. In the Adivasi Community, it is a socially and culturally accepted habit for both father and mother to

consume alcohol. von Knorring noticed that children in families having an alcohol dependent father, poor parental interaction, and inconsistent disciplining were poor academic performers.<sup>18</sup> 72 (92.31%) students in our study were from low socio –economic status families. 72 (92.31%) students were from low socio – economic status families. Rozario (1991) found nearly one third children from lower, middle socio-economic status were scholastically backward and majority of them had specific learning disabilities.<sup>19</sup> Several other studies have reported that poor scholastic performance was

associated with poverty and disadvantaged family conditions leading to inability of the parents to provide facilities (stationary, furniture etc.) to the child, which are favorable for good educational performance.<sup>20,21</sup> Geeta B Nambissan noted that poor infrastructural facilities, lack of effective learning supports to acquire linguistic, numerical and cognitive competencies adversely affect the schooling of Dalit children.<sup>22</sup> Ushashree and Pushpa (1980) found that socially disadvantaged children were poor in scholastic performance and academic adjustment.<sup>23, 24</sup>

**Table no 1**  
**Showing distribution of students according to the Grades in skills of Basic reading, Mathematical calculation and Mathematical Reasoning.**

Assistance	Basic Reading	Mathematical Calculation	Mathematical Reasoning	Total
	Total students	Total students	Total students	
Maximum Assistance (Grade 1)	30	20	27	77
Moderate Assistance (Grade 2)	08	33	25	66
Minimum Assistance (Grade 3)	6	5	05	16
Without Assistance (Grade 4)	4	6	3	13
Unable to read with maximum assistance (Grade 0)	30	14	18	62
Absent students	02	02	02	02
Total students	80	80	80	

**Table no 2**  
**Showing sex-wise and grade-wise distribution of students.**

Grade	Basic reading female	Basic reading male	Math calculation Female	Math Calculation Male	Math Problem Female	Math Problem Male	Total
Maximum Assistance (Grade 1)	18	12	11	09	19	08	77
Moderate Assistance (Grade 2)	5	3	22	11	14	11	66
Minimum Assistance (Grade 3)	2	4	3	2	3	2	16
Without Assistance (Grade 4)	2	2	3	3	2	1	13
Unable to read with maximum assistance (Grade 0)	22	8	10	4	11	7	62
Absent students	1	1	1	1	1	1	02
Total students	50	30	50	30	50	30	

**Reading skill**

40(81.63% of females) females and 20(66.67% of males) males were able to score below average, i.e. Grade 0 & 1.

9(18.37 % of females) females and 9 (31.03 % of males) males were able to score above average, i.e. Grade 2+3+4.

Both males and females had similar percentage in the above average category.

In the below average category males were more than females.

Overall 60 (76.92 % of 78 students) students were below average and 18 students (23.08 % of 78 students) were above average for the Reading Skill.

Shaywitz et al., (1990) also reported an absence of gender difference in the ratio of reading difficulty when objective measures were used. However, when teachers were asked to identify children with difficulties, a preponderance of males over females was noticed.<sup>25</sup>

Lewis et al & Share et al pointed towards a higher prevalence for males compared to girls for reading and arithmetic difficulties.<sup>26, 27</sup>

Shenoy and Kapur reported an overall prevalence of reading difficulty to be 4.69%.<sup>28</sup>

### **Mathematical Calculation**

21 (42.85% of females) females and 13 (44.83 % of males) males were able to score below average i.e. Grade 0 &1.

28(57.14% of females) females and 16(55.17 % of males) males were able to score above average, i.e. Grade 2+3+4.

Both males and females had similar percentage in both above and below average category in performance.

Overall 34(43.59 % of 78 students) students were below average and 44 (56.41 % of 78 students) students were above average in mathematical Calculation.

Lewis et al and Share et al noted higher prevalence for males compared to girls for arithmetic difficulties.<sup>26, 27</sup>

### **Mathematical Problem Solving**

30(61.22% of females) females and 15(51.72% of males) males were able to score below average, i.e. Grade 0 &1.

19(38.78% of females) females and 14(48.28% of males) males were able to score above average, i.e. Grade 2+3+4.

Females were more in the below average category than males in problem solving tasks.

Overall 45(57.69 % of 78 students) students were below average and 33(42.31% of 78 students) students were above average. Here the percentage of below average students was more compared to above average students in problem solving tasks.

Overall, 60 (76.92 %) were below average in the reading skill.

34 (43.59 %) students were below average in mathematical calculation skill.

45(57.69 %) students were below average in mathematical problem solving skill.

In the study by Shenoy and Kapur, the rates of specific difficulties such as reading, writing and arithmetic were found to be 4.69%, 5.15% and 15.96% respectively.<sup>28</sup> This is much higher in our study in the comparison of above study.

Overall prevalence of scholastic backwardness was 59.40% when the average of all the skills was taken.

Saraswati C.Hunshal and V.Gaonkar noticed that nearly 50% of institutionalized children were rated as poor in reading and arithmetic abilities while one-third of them were poor in writing ability.<sup>15</sup> This is almost similar to our study.

In the Reading skill, males were more than females in the below average category.

In the math's calculation, there was not much difference amongst males and females in both above and below average category.

In the math's problem solving skill, females were more than males in the below average category.

Shenoy and Kapur found 10.99% of the boys and 9.38% of the girls were below average performers with an overall prevalence of 10.23%.<sup>28</sup> It is much higher in our study.

Using Krusal-Wallis test for Table no .1, it was found that there was no significant variation in the skills performance between the students when tested for basic reading, math's calculation and math's reasoning with respect to the scores given for the skills.  $Kw=0.03519$ ,  $p=0.9826$

**Table no 3**  
**Showing distribution of students according to scores and sex.**

Performance scale	Comment	Females	Males	Total
Score				
12	Excellent	2	2	4
10-11	Very Good	3	2	5
8-9	Good	2	2	9
4-7	Average	3	2	
<4	Below Average	39	21	60
Absent		1	1	2
Total		50	30	80

18(23.07%) students scored 4 and above, i.e. average and above. 60(76.92%) students had score below 4, i.e. below average. 39(50.00%) students were females and 21(26.92%) students were males of the total 60 students who scored 4 and below, i.e. below average. 10(12.82 %) females and 8(10.26 %) males scored 4 and above, i.e. above average. Using Mann Whitney Test it was observed that there was no significant difference between male and female students. ( $U=9.000$ ,  $p=0.5296$ ) in the task performance of reading, arithmetic calculation and mathematical problem solving

## CONCLUSION

Overall prevalence of scholastic backwardness was 59.40% when the average of all the skills was taken. Overall, 60 (76.92 %) were below average in the reading skill. 34 (43.59 %) students were below average in mathematical calculation skill. 45(57.69 %) students were below average in mathematical problem solving skill. There was no significant variation in the skills performance between the students when tested for basic reading, math's calculation and math's reasoning with respect to the scores given for the skills.  $Kw=0.03519$ ,  $p=0.9826$ . There was no significant difference between male and female students ( $U=9.000$ ,  $p=0.5296$ ), in the task performance of reading,

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arithmetic calculation and mathematical problem solving 59.04% of the students scored average and below average. Hence there is need to change the way of teaching but no need of any special educator or any special therapy. 59.04% students are scholastically backward but there is no Learning Disability amongst them.

**Recommendations:** Children whose problems are diagnosed early and treated properly can improve or learn and minimize their disabilities. Intervention programmes are the key for preventing or minimizing the learning difficulties in majority of school going children whatever may be the underlying causes of learning problems.

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