

## Study of Risk Factors of Academic Underperformance in Rural School Children in a Coastal District of Odisha

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### Abstract

**Aim:** A scientific and systematic research was made to find the incidence and etiology of academic underperformance focusing on student, teacher, parent and other social factors and its impact on children.

**Material and Method:** A cross-sectional observational study was carried out in three schools of some parts of rural areas of Odisha with 125 students of class VIII with less than 35% aggregate marks. Parents, Class teachers and Head of the schools were interviewed through questionnaires and interview schedules.

**Results:** All the students belong to age group of 12-16 years. The ratio of males (85) to females (40) is 2.1:1. Parental illiteracy and no contribution in academics in 88% of the students is one of the important factors in their underperformance. 41.2% of the fathers are alcoholic and 7.2% students face domestic violence. Other causes of academic underperformance are attendance <40% in 44%, visual acuity <6/18 in 8.8%, acute illness (12%), dental caries (28%), worm infestation (21.6%) and other chronic ailments (9.6%). 72% of the students had previous history of academic underperformance. 8.8% of them had history of suicidal and depressive thoughts.

**Conclusion:** Social and family factors have influence on the academic functioning of children. A wholesome approach including finding the etiology and counseling for the students, teachers and parents individually can give a proper direction towards solution for repeated underperformance.

**Keywords:** Academic underperformance; Children; Rural

### Introduction

The increase in population and the general awareness about the significance of education have resulted in an enormous increase in the school going population at the secondary level. But unfortunately this has given rise to manifold problems which have to be tackled wisely and urgently. These problems may be due to different constraints in the form of infrastructure, academic, inadequate teacher training programmes, finances, role of the parents, their education and economic status, role of the society, Government and its educational policies.

Academic underachievement of children is a big concern among parents and teachers in present day competitive society. It is reported that around 20% of school children have scholastic backwardness [1]. Factors associated with scholastic backwardness include physical illnesses, below average intelligence, learning disorders, attention deficit hyperactivity disorder, psychiatric disorders, family and school factors [1,2]. Scholastic backwardness contributes to school dropout, especially after the primary school years [3] and should be recognized and remedial measures initiated, in the primary classes itself for the best results. At present, children are identified much later and as a result, optimum benefit of remedial education is not obtained. It is important to identify the risk factors for scholastic backwardness so that these children can be identified early and corrective measures

initiated. The aim of the present study was to identify the risk factors for scholastic backwardness in children.

### Materials and Methods

This study was designed to be a cross-sectional observational study carried out in three schools of rural areas of district Jagatsinghpur, Odisha, India. 125 Students of class VIII from three different schools were included in the study those being, getting below average grade i.e. less than 35% aggregate marks in the previous academic year. Parents, Class teachers and Head of the schools were also interviewed separately during time other than the school hours in a separate room maintaining confidentiality after informed consent from the Head of the schools and parents.

### Exclusion criteria

Dropouts from school were excluded. Parents of Students complaining of gross learning disorders and known chronic ailments under treatment were excluded from our study.

The survey method was selected for this study through a semi-structured questionnaire was designed which consist of following parts:

Socio-demographic profile (2) Parental factors (3) School factors (4) Teacher related factors and (5) Personal factors of the students. Privacy and confidentiality were ensured during the whole process.

Education level	Mother		Father	
	Nos.	Percentage	Nos.	Percentage
Illiterate	31	24.8	24	19.2
Primary School	56	44.8	24	19.2
Middle School	37	29.6	63	50.4
High School	1	0.8	14	11.2

**Table 1:** Parental Education (n=125).

Occupation	Mother		Father	
	Nos.	Percentage	Nos.	Percentage
Professional	0	0	2	1.6
Clerk/Shop owner	7	5.6	18	14.4
Skilled worker	35	28	35	28
Unskilled worker	47	37.6	66	52.8
Unemployed	36	28.8	4	3.2

**Table 2:** Parental Occupation (n=125).

Table 2 shows that the majority of the children (52.8%) have fathers who are unskilled workers and only 2 of the children had fathers who are in professional services like school teacher. 4 children have unemployed father.

Amongst the 125 children with Scholastic Backwardness 71.2% of mothers are employed, most of them being unskilled worker 37.6%. 41.6% (52) of fathers consume alcohol atleast once daily. It is seen that seventy students comprising of 56% study regularly for 3-4 h per day. Twenty three (18.4%) students study for 1-2 h and thirty two (25.6%) students do so for 2-3 h. Out of the 125 children, 59(47.2%) children are attending extra schooling in the form of tuitions to improve their academic performance. Most of them have history of repeated underperformance in class. It is seen that the majority of the students i.e. 55(44%) have attendance <40% and only 36(28.8%) attend school for more than 60% of the days.

Students	Spectacles-full correction	Poor correction with spectacles	Visual acuity <6/18 in better eye	Normal vision
Nos.	4	1	11	109
Percentage	3.2	0.8	8.8	87.2

**Table 3:** Visual Handicap in Students (n=125).

Table 3 shows that out of 125 students, 87.2% i.e. 109 had normal visual acuity as checked by Snellen's chart. Five of them are using spectacles with one amongst them having poor correction even with spectacles. Eleven (8.8%) of the students have visual acuity <6/18 in better eye which was never addressed before.

Table 1 shows that out of 125 students, only one mother is matriculate. 24.8% are illiterate and 44.8% completed only primary education. Amongst fathers, 19.2% are illiterate and 11.2% completed their high school education. Only two (1.6%) students received academic help from their both parents whereas twenty four (19.2%) received help from either of the parents. Majority of students comprising 88% didn't receive any academic help from their parents.

Students	Dental caries		Worm infestation		Acute disease 15 days before exams		Chronic disease	
	Yes	No	Yes	No	Yes	No	Yes	No
Nos.	35	90	27	98	15	110	12	113
Percentage	28	72	21.6	78.4	12	88	9.6	90.4

**Table 4:** Students with Acute and Chronic Ailments (n=125).

From Table 4 it is seen that fifteen(12%) students suffered from acute disease within fifteen days before examination and most of them had fever. 28% of students have dental caries on examination untreated. 21.6% students have history of worm infestation.

Twelve (9.6%) of the students have chronic disease lasting more than six months like chronic cough, asthma, epilepsy and hypothyroidism. It is seen that out of 125 students, nine (7.2%) of the students face domestic violence at home most of them are due to paternal alcoholism.

Eleven (8.8%) of the students had suicidal and depressive thoughts following results.

The study shows that majority of the students comprising of 72% had history of academic underperformance in previous years. For 28% of the students, this is the first episode. In the study 80% students felt ashamed after declaration of the results, 48% had guilty feeling of not studying well whereas 44.8% (56) of the students couldn't believe it.

## Discussion

The prevalence of scholastic backwardness in previous studies by MKC Nair et al. [4] was 5-15% and by Shenoy et al. [5] was 10.38%.

Both the studies defined scholastic backwardness as repeated failures in grades and poor academic achievement securing marks < 35% as in this study.

In the present study, significant number of students with academic underperformance has lower education and employment status. Previous studies have found that academic achievement is significantly influenced by the socioeconomic and cultural milieu of the family and parental involvement in school activities [6-8]. Amongst mothers, 24.8% are illiterate and 44.8% completed only primary education. Amongst fathers, 19.2% are illiterate and 11.2% completed their high school education. Only two (1.6%) students received academic help from their both parents whereas twenty four (19.2%) received help from either of the parents. Majority of students comprising 88% didn't receive any academic help from their parents. Lower education status of the father and unhappy family were found to predict poor scholastic performance in adolescents in a study from Kerala [9].

School absenteeism was reported to be greater in students whose fathers were laborers or self-employed and whose mothers had lower educational levels [10]. This may contribute to lower academic performance in children. Apart from socioeconomic factors and parental education, other factors in the family environment also influence academic functioning of children. It was reported that disturbing factors at home including quarrels between parents and siblings, broken homes, substance abuse like alcoholism in parents and being burdened by domestic responsibilities were more in low achievers compared to high achievers [9].

A healthy family environment fosters academic achievement. In our study, chronic medical illnesses were found to be significantly more in children with scholastic backwardness. It is well established that children with chronic illnesses have poor academic functioning compared to healthy children [11-15]. The low achievement is not simply a result of school absenteeism due to the illness, but due to the inherent aspects of the illness [13,14]. Children with chronic illnesses and the added disadvantage of low socioeconomic status, are at particular risk for poor school achievement [12]. This emphasizes the importance of providing educational support to children with chronic illnesses.

**Significance for public health:** The prevalence of academic underperformance in this study is 24.28% with majority being boys( 36.63%) many of them living in disadvantageous social living conditions pertaining to water supply, housing, lighting and poor literacy of parents and 8.8% of the students suffer from poor vision.

Lack of parent-teacher association, domestic violence, suicidal and depressive thoughts are contributing factors. A wholesome approach including finding the etiology and counseling for the students, teachers and parents individually can give a proper direction towards solution for repeated underperformance.

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