

## Maanasa: An early individualized remedial educational intervention model for scholastic backwardness among upper primary students

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### ABSTRACT

**Background:** Scholastic backwardness is called as the learning achievement which is below the expected for a given age, cognitive skills, and schooling. Early identification and remedial measures are to be initiated at school level to control its lifelong impact. **Objective:** The objective of this study is to evolve an early individualized, remedial educational intervention model for the scholastic backwardness among upper primary students at the school level by the resource teachers. **Materials and Methods:** Whole upper primary students of the four government schools of the South Maararikkulam Grama Panchayath constituted the study population. The scholastic backwardness among them was identified and referred to specially trained resource teachers who were appointed in the schools under Maanasa project. They were graded as mild, moderate and severe category based on the level of scholastic backwardness. Children were given 1 academic year of individualized educational intervention along with inclusive education. Apart from these interventions, families of the identified students were given psychosocial interventions to create a learning-friendly atmosphere in their families. Learning skills of the scholastically backward students were re-assessed at the end of academic year. **Results:** Out of total 629 students, 147 had scholastic backwardness (23.7%). Among these, 68 had mild, 60 moderate, and 19 had severe scholastic backwardness on reading skill grading. Psychosocial problems including alcoholism, domestic violence, quarrelsome events, and abandoned family were noticed among 48.7% of the parents of scholastically backward students. Reassessment at the end of academic year showed improvement of scholastic skill among 52.38% of the students. **Conclusion:** The present study proves that scholastic backwardness can be successfully approached and intervened at school level itself by imparting individualized educational interventions by trained resource teachers. The parents should be taken into confidence for successful intervention.

**Key words:** *Early individualized educational intervention, Family intervention, Resource teacher, Scholastic backwardness*

In the present competitive society, the importance of academic achievements is stressed even before the child joins the school. Scholastic achievement has become an index of child's future [1]. Learning is not a unitary process involving teacher and student. The developmental process of the child plays an important role in the learning process. In an appropriately developing child with normal vision, hearing, adequate psychosocial stimulation and school exposure, the primary learning skills are attained during the primary school period. Academic achievement depends on the relationship and interplay of familial, psychological, educational, social and economic atmosphere in and around the child [2].

Primary learning skills such as reading, writing, and arithmetic are important to a child's success in academics, social and economic development and future life [3]. However, learning these skills is difficult for a group of children, and they experience significant delays in one or more academic areas [4]. Evaluation and judgment of students' performance is largely based on the

grades achieved by them. A significant percentage of students fail to make progress with traditional classroom instructions. It is called scholastic backwardness. Scholastic backwardness is defined as having the scholastic performance below two standard deviations from what is expected for that age and grade with normal intelligence, intact sensory functions and adequate opportunity to learn [5]. It is a symptom which will be manifested as repeated failure in examinations and grade.

Majority of the scholastic backwardness present in the form of reading and writing difficulty [6]. Prevalence of scholastic backwardness among school children was 20% [7]; however, Kamble and Takpere [8] reported a high prevalence of 59.4% among third standard students. Academic backwardness can be due to the poor ability of the student, lack of practice, improper guidance in junior classes and non-congenial family atmosphere. The causes of scholastic backwardness are many and complex [5]. Studies showed multiple reasons for underperformance including average intelligence, mental retardation, specific learning

disability, attention deficit hyperactivity disorder (ADHD), emotional problems, psychiatric disorders, poor sociocultural home environment, and medical problems [7,9].

Academic backwardness contributes to school dropout, especially after the primary school years. It is important to identify the risk factors for academic backwardness so that these children can be identified early and corrective measures initiated at school, family and social level. In this background, the present study was aimed to evolve an early individualized remedial educational intervention model for scholastic backwardness among upper primary students at the school level by resource teachers after taking the parents into the confidence through psycho-social intervention.

## MATERIALS AND METHODS

The present study is an implementation research educational project called "Maanasa" (mind). It was done under decentralized planning of South Maararikulam Grama Panchayath, Alappuzha, Kerala. The funding was done by Grama Panchayath. The majority of the population in the Panchayath belong to educationally, socially, and economically backward class of people. The target group was the whole upper primary students (5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> standard students) of the Panchayath. There were four upper primary schools in the panchayath namely G.H.S.S., Kattoor, V.V.S.D.U.P.S., Pathirapally, G.H.S., Pollethai and S.C.M.V.U.P.S., Chettikkadu. The study sample is the whole upper primary students of the four government schools of the Panchayath. Scholastic backwardness among these students was identified and intervened (Flow Chart 1).

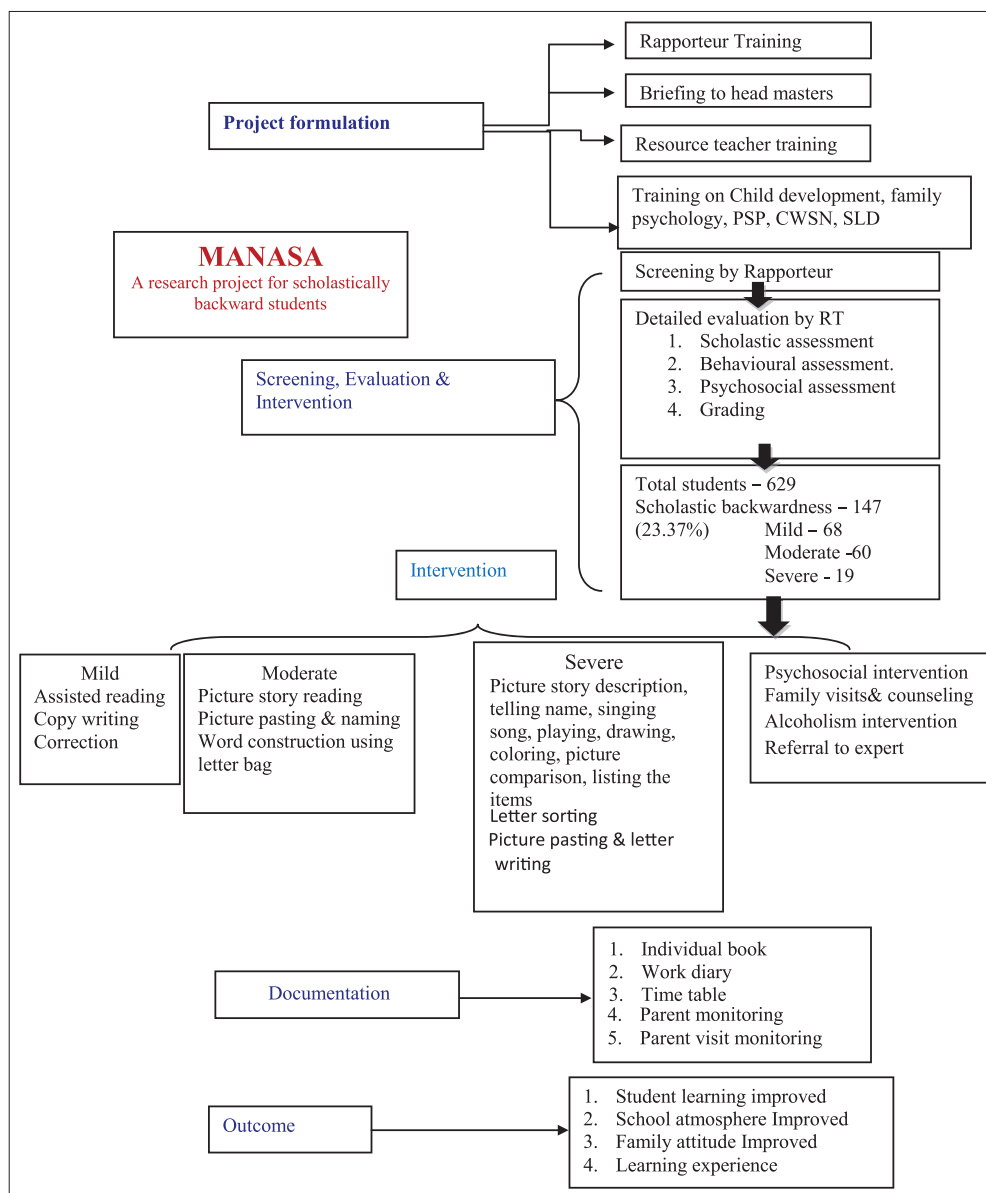
First, one rapporteur was selected from each upper primary school. They along with all class teachers of the 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> standards of the upper primary schools were given information in a 1 day workshop on scholastic backwardness, its causes, how to identify it and principles of individualized educational intervention. The class teachers were asked to identify and refer those students with scholastic backwardness from their class to resource teachers in the respective schools who were appointed through the Maanasa project. Rapporteurs coordinated the whole activity in the respective schools. Head Masters meeting was conducted to brief about the project and smooth conduct of project (Flow Chart 1). A meeting of the parents of the children who were identified to be having scholastic backwardness was conducted. The researcher attended the meeting and discussed how to create child-friendly learning-friendly environment in the family. Skipping of TV serials during 7-9 pm was discussed and everybody agreed to it. The influence of family conflict among children is discussed in detail. There was a very warm response from the parents.

Second, the resource teachers (with special B.Ed.) were selected through an interview. One resource teacher was allotted for each 30 students in a school who were identified to be having scholastic backwardness by the respective class teachers. Two schools got two resource teachers according to the number of scholastically backward children. The selected resource

teachers were given a series of workshop-based training on child development, developmental psychology, family psychology, dysfunctional family (including alcoholism, domestic violence, etc.) and its influence on child development and learning. They were also given training about interviewing techniques to interview children and their parents, recognizing primary learning skills in students, identify children with special needs (including mental retardation, specific learning disability, ADHD, behavioral disorders, and non-organic causes of scholastic backwardness), and how to screen children with scholastic backwardness. Detailed evaluation of the student and their family was done with a prepared pro forma and various individualized educational intervention strategies for scholastic backwardness based on the grading and primary family counseling.

After primary evaluation of each identified child and interviewing the respective family, details were entered in an individual book specified for each child by the respective resource teachers. Then scholastic backwardness of each students were graded as mild (recognizes letters, having word construction, but no continuous reading skill in Malayalam), moderate (recognizes letters but not having the word construction skill in Malayalam) and severe (not even letter recognition). Individualized remedial educational interventions were administered to each student as per the category they belong. See details of interventions in the Flow Chart 1. One period per week was allotted for those belong to a mild category and two periods per week was allotted to the moderate and severe category. The weekly timetable was formulated by each resource teacher based on the number of students they have. The principle of inclusive education was followed in the present study. The identified scholastically backward students attended the regular class as per the class timetable of the school, but each one of them were taken to the resource room by the resource teacher during the period specified for them as per the resource teacher's timetable.

After the individualized educational intervention period, students were sent back to respective class by the resource teacher itself, and then scheduled student was taken for. With this inclusive approach, each scholastically backward student got the benefit of general schooling and individual special attention according to their educational need. Homework was given to each student according to their level of remedial education. The parents were asked to supervise, get it down and sign it and send back to school daily. It was entered in a parent monitoring diary. Parents were asked to visit the resource teacher monthly, and their responses and feedbacks were entered in the parent visit diary. Resource teachers used Sundays for family visits to do psychosocial intervention to create and ensure learning-friendly atmosphere in the home. Parents were asked to skip television serials/programs during 7-9 pm to avoid disturbances for learning. All resource teachers were entrusted to do the weekly lesson planning and to write their activity in the work diary. All resource teachers were asked to keep the documents namely individual book, timetable, work diary, parent monitoring, and parent visit monitoring book as shown in the Flow Chart 1. The whole school level activity was reviewed and coordinated by a coordinator in the Panchayath.



Flow Chart 1: Early individualized remedial educational intervention model for scholastic backwardness

Weekly report of the whole activity was send to the researcher through e-mail.

After the period of initial training, the researcher had done monthly visits to conduct review meeting of the resource teachers along with the coordinator. Researcher had also seen scholastically backward students referred by the resource teachers and given suggestions accordingly. Apart from this, surprise inspection visits were done by the researcher along with the coordinator to each school, and the field activity was monitored and shaped. At the end of each academic year, the researcher along with the coordinator visited each school and re-assessed learning skills of the scholastically backward students. Data were entered into MS Excel sheet and analyzed.

**RESULTS**

Out of total 629 students from the four upper primary schools, 147 had scholastic backwardness (23.7%). Male domination

Table 1: Sex distribution of the study population

Sex	Scholastic backwardness	Total upper primary school population
Boy	98 (66.67)	393 (62.48)
Girl	49 (33.33)	236 (37.52)
Total	147 (23.37)	629

was observed among the whole study population (393 male and 236 females) as well as those with scholastic backwardness and its categories (Table 1). Among these 147 (98 male and 49 female) students, reading skill grading showed that, 68 (50.13%) had mild, 60 (45.35%) had moderate, and 19 (12.93%) had severe scholastic backwardness (Table 1). Common psychosocial problems (family psychopathology) observed in the family were domestic violence, alcoholism, quarrelsome events, and abandoned family (father abandoned his wife and children). It was noticed among 48.7% of the families of children with scholastic backwardness.

**Table 2: Distribution categories of children with scholastic backwardness and improvement status with one year individualized educational intervention at school level by resource teachers**

Sex	Categories of children with scholastic backwardness				Improvement status of categories			
	Mild (%)	Moderate (%)	Severe (%)	Total	Mild to normal (%)	Moderate to mild (%)	Severe to moderate (%)	Total (%)
Boys	45 (66.18)	39 (65)	14 (73.68)	98 (66.67)	22	20	8	50 (64.94)
Girls	23 (33.82)	21 (35)	5 (26.32)	49 (33.33)	12	11	4	27 (35.06)
Total	68 (50.13)	60 (45.35)	19 (12.93)	147 (100)	34 (50)	31 (51.67)	12 (63.15)	77 (52.38)

After 1 academic year of individualized educational and family psychosocial intervention, learning skill improvement was observed among 52.38% of the students (Table 2). Among the mild category, 50% improved from their word construction stage and gained continuous reading skill. About 45.35% of students from the moderate category improved from their letter recognition stage and gained word construction skill. Finally, from severe category, 63.15% improved from poor or absent letter recognition and gained letter recognition stage.

## DISCUSSION

The male domination was maintained in the whole study population, scholastically backward group and its subcategories. Many studies observed no gender differences in the reading difficulty [8,10]. The male dominance in the present study could be due to the original dominance of boys in the whole study population.

The high prevalence of family psychopathology in the present study (48.7%) is a known risk factor which affects the interpersonal relation between parents, child-rearing practice, and parenting style. These are the risk factors for behavioral and psychological problems among children [11]. The association of scholastic backwardness with behavioral and psychological disturbance is well established [9,12]. Lack of cooperation, contribution, inspiration, and guidance from the family members were the reported reasons for scholastic backwardness among 30% of the respondents in another study [13]. In another study, significant numbers of the parents (40%) were negligent about the significance of parenting style in the overall growth and development of the child [14]. Pratinidhi et al. [15] observed that for academic backwardness, psychological causes are more responsible than the physical one. The identification of the family related risk factors for psychological problems and scholastic backwardness among children are very important. Imparting psychosocial intervention to the family to solve these issues had given a good result in academic achievement in the present study.

The prevalence rate of scholastic backwardness (23.37%) in the present study very well correlates with the other available studies [7]. Categorization of scholastic backwardness was according to the functional (reading skill) level of the students. Diagnostic labeling of each condition was not stressed in the present study since it was an individualized educational intervention model at teacher's level in the school. Diagnostic labeling will make it more complex at teacher's level. Many researchers signified the relationship of subaverage intelligence [7,9] and

behavioral disorders [9,15] with scholastic backwardness.

The most important outcome of the present study was the significant improvement in the learning skill (52.38%) achieved by all categories of children with scholastic backwardness. The improvement process was from their present status to next higher level of scholastic skill. There was no over jumping of levels of status. The mild category was given one period per week of intervention with assisted reading activity, copy writing, reading newspaper, and stories from preprimary and primary level books. Students were congratulated for their improvement. Majority of the students in this group might belong to sub-average intelligence or those with family psychopathology, poor attention, and encouragement in the family and having mild specific learning disability.

For moderate category, word construction skill was practiced. The resource teacher and the student together practiced picture story reading by giving stress to word construction. Teacher read the story; students were not compelled to do it but were allowed, if they had come forward. Along with this, the teacher constructed words using letter bag and the student was asked to do it. Then, picture pasting and naming were practiced with simple to complex word when the student had improved. For each improvement children were given honor so that they realized that they were also be eligible for recognition. The majority of the students in this category might be belonging to mild-moderate mental retardation, moderate specific learning disability, or mild autism, etc.

For severe category, the individualized educational intervention activity was like quality time spending or shared activity between a mother and the preprimary child. The resource teacher and student first started their activity together by singing songs, playing, and picture description, telling names, listing items in a picture, picture comparison, coloring pictures, and drawing. It helped to build up rapport with the student initially. After finishing the learning and practice of pre-learning skill successfully, letters were introduced by showing and naming individual letters from the letter bag. This was followed by letter sorting and naming of letters by the student. It was followed by picture pasting and writing the appropriate letter. All activities followed the principles of play method and encouragement. Higher level of improvement (63.15%) was noticed among the severe category. Clinical experience shows that usually this category will be formed by children with severe mental retardation, autism, and severe specific learning disability. In routine school atmosphere, these types of children will be totally ignored. The present study had given more attention to these groups; so, they attained good

improvement. The progress of each student was monitored regularly and documented in their individual book.

In the present study, 47.62% of students did not show any significant improvement in their learning skill. However, this does not mean that they had not achieved any improvement at all; instead, they had not attained any demonstrable improvement in learning skill. They also showed definite improvement in their communication and social skills. The reciprocal interaction between them and other students and teachers were improved. We can also assume that they will progress in their development through continued intervention and play therapy. The students belonged to this category could be having moderate-severe mental retardation, autism, severe specific learning disability, etc.

In the school, the scholastically backward students are usually criticized, underestimated, or ignored without specifically looking for the cause of academic underachievement. Hence, the morale of these students will also be at the lowermost level. They indulge in disturbing others or manifest behavioral issues. Association between academic underachievement and behavioral disorder are well established [9,12]. The basic principle of all the activities in the present study was play method with non-derogatory approach and praising the child for even mild achievement. The reason for significant improvement among all the groups could be due to this encouraging individualized educational intervention with an inclusive approach. All these students attended regular class with along with the special attention and intervention. It improved the class and school climate and the student morale. The class teachers reported improvement in their behavior and learning skill. Rapport between resource teacher and individual student and their family was so intimate. Resource teachers visited family regularly and counseled those regarding family issues and how to maintain learning-friendly atmosphere in the family. It also helped the overall improvement of the scholastically backward student. The reflections of the individual parents, especially of the mothers, given in the parent visit monitoring book were very rewarding to the resource teachers. Researchers had documented that attitude of teacher and classroom climate plays an important role in the academic achievement and behavior of the student [16].

Hence, early identification of scholastic backwardness and individual intervention at school level itself is very important for the future prospects of a child. Unrecognized and unresolved, scholastic backwardness has a lifelong impact on the child and adolescent, affecting school completion, higher education, interpersonal relationships, prospects for employment, marriage, etc. The limitation of the present study was that the normal controls were not taken into consideration which could have better shown the impact of this intervention.

## CONCLUSION

The package with early identification, individualized educational intervention at school level with the inclusive approach and psychosocial intervention for the family in the present study had evolved as a better model for children with scholastic

backwardness. The present study showed that scholastic backwardness can be successfully approached at school level itself by the trained resource teachers. A coordinated multidisciplinary approach is very essential here.

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## REFERENCES

1. Tiwari G, Galundia R. Academic backwardness among rural adolescents: Challenge for society. *Int J Adv Res.* 2016;4(3):438-44. Available from: [http://www.journalijar.com/uploads/683\\_IJAR-9091.pdf](http://www.journalijar.com/uploads/683_IJAR-9091.pdf).
2. Rutter M. Family and school influences on behavioural development. *J Child Psychol Psychiatry.* 1985;26(3):349-68.
3. Snow CE, Burns MS, Griffin PJ. Preventing Reading Difficulties among Young Children. Washington, DC: National Academy Press; 1998.
4. Salzinger S, Feldman RS, Hammer M, Rosario M. The effects of physical abuse on children's social relationships. *Child Dev.* 1993;64(1):169-87.
5. Neinstein SL. Adolescent Health Care: A Practical Guide. 4th ed. Baltimore, USA: Lippincott, Williams and Wilkins; 2003.
6. Shenoy J, Kapur M. Prevalence of scholastic backwardness among five to eight year old children. *Indian J Psychiatry.* 1996;38(4):201-7.
7. Karande S, Kulkarni M. Poor school performance. *Indian J Pediatr.* 2005;72(11):961-7.
8. Kamble SV, Takpere YA. A study to assess scholastic backwardness in third standard students at an ashram school in Navi Mumbai. *Int J Pharm Bio Sci.* 2013;4(2):B1154-61.
9. Jayaprakash R. Diagnostic profile in children presenting with poor scholastic performance. *J Evol Med Dent Sci.* 2013;2(9):1040-8.
10. Shaywitz SE, Shaywitz BA, Fletcher JM, Escobar MD. Prevalence of reading disability in boys and girls. Results of the Connecticut Longitudinal Study. *JAMA.* 1990;264(8):998-1002.
11. Jayaprakash R, Rajamohanam K, Anil P. Determinants of symptom profile and severity of conduct disorder in a tertiary level pediatric care set up: A pilot study. *Indian J Psychiatry.* 2014;56:330-6.
12. Schachter DC, Pless IB, Bruck M. The prevalence and correlates of behaviour problems in learning disabled children. *Can J Psychiatry.* 1991;36(5):323-31.
13. Aneja A, Duhan K, Sangwan S. Rationale of scholastic backwardness in rural children. *Am Int J Res Humanit Arts Soc Sci.* 2016;15(1):59-62. Available from: <http://www.iasir.net/AIJRHASSpapers/AIJRHASS16-225.pdf>.
14. Adarsh E, Divya S, Wajapey SD. Poor scholastic performance in children. *J Evol Res Paediatr Neonatol.* 2016;2(1):1-3. Available from: [http://www.jerpn.com/latest-articles.php?at\\_id=8](http://www.jerpn.com/latest-articles.php?at_id=8).
15. Pratinidhi AK, Kurulkar PV, Garad SG, Dalal M. Epidemiological aspects of school dropouts in children between 7-15 years in rural Maharashtra. *Indian J Pediatr.* 1992;59(4):423-7.
16. Yule W, Rutter M, Berger M, Thompson J. Over- and under-achievement in reading: Distribution in the general population. *Br J Educ Psychol.* 1974;44(1):1-12.

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