

Effect of psychological intervention on specific learning disorder: an intervention study

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ABSTRACT

Now a day's children do not perform well in academic area, simultaneously becomes increased number of population academic area in day to day, some children didn't perform well in academic area and his or her parents didn't also understand this problem. This case is same suffered in academic performance area. This paper presented the case of 12 years old boy suffering from lack of reading and writing skills, day to day poor performed in academic area, poor calculation, lack of self-confidence, poor attention and destructivity of 6-7 years, baseline assessment done with help of (i) Malin's Intelligence Scale For Indian Children(ii) Ravens Standard Progressive Matrices for assessed of I.Q. and assessed of screening for Specific learning disorder for used of (iii) Grade level assessment device for children with learning problems in schools.(iv) Psychological Assessment of Children in the Clinical Setting (NIMHANS), overall result findings indicating child was diagnosed according to ICD-10 Specific learning disorder. Who was treated with intervention strategies for Specific learning disorder and child intervention was done with the help of positive findings obtained from GLAD. After intervention post assessment done with the GLAD, to see the percentage of the improvement.

Keywords: *Specific Learning Disability, Psychological Intervention, Psychological Assessment*

Specific learning disability (SLD) refers to a disorder in one or more of the basic processes involved in understanding or using language, persistent difficulty in the academic performance such as skills in reading, written expression, or mathematics, beginning in early childhood, which is inconsistent with the overall intellectual ability of a child and the normal patterns of skill acquisition, are disturbed from the early stages of development. This is not simply a consequence of a lack of opportunity to learn, it is not solely a result of mental retardation, and it is not due to any form of acquired brain trauma or disease, (ICD-10, F81.0).

Medically oriented theories view learning disabilities as overt symptoms of underlying biological pathology. The inferred pathology has been conceptualized by different theories

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as effecting perceptual systems, for example, perceptual motor functioning (Mann, 1979). According, to these theoretical viewpoints, the content for instruction should consist of skills related to the deficit underlying pathology (e.g. visual discrimination, fine motor skills, eye movements). The major emphasis in remediation is on strengthening the process weakness.

Objective

In the case being reported here, the role of Intervention Strategies was explored for Specific Learning Disorder.

Case Summary

A 12 years old boy came with his mother, with chief complaints of lack of reading and writing skills, day to day poor performed in academic area, poor calculation, Lack of self-confidence, poor attention and destructivity. Detail history taken from mother. Child was born full term normal delivery at hospital with birth cry was present after delivery, birth weight was normal; his achieved almost all his developmental milestones on time. Here he brought by his mother with chief complaints of poor academic performance, poor hand writing and reading, poor handwriting and his notebooks are very messy, poor attention span, easily distracted, and poor self-confidence. He was sent to play school at the age of 5. Till class 2nd he studied in Agra local school (CBSE Board). His school was changed to lower the pressure of studies. He was sent to DPS (CBSE Board), Agra. As per his mother since the beginning he had problem in coloring-he would not color the entire figures like circles and triangles when asked to do so in nursery classes. This is continuing till now. His handwriting is also illegible and her mother also reported that he doesn't read by himself-says it's too much for him to do. So he reads out from the book to help him with studies. He doesn't look interested in studies at all. He forcibly makes him study for long hours. He was managed scored in class 2nd std, but after crossed 2nd std he did not manage to get good marks in class 3rd and 4th. He Promoted bases of mother because his mother is teacher in same school, currently he is in 5th class. Presently he is not interested in his studies; he has been low in academic performance. His handwriting is very poor and his notebooks are very messy. He is very slow in writing and illegible writing has multiple confusions in alphabets, grammatical and punctuation mistake is also common in his handwriting. He shows difficulty in reading age appropriate passage. He takes a lot of time and effort during reading properly. He would not understand the written sums that needs step to solve it. He shows lack of interest and motivation in studies, but he did not perform well according to class.

Design

A single case pre-post and follow up method was used. Two major criteria were selected assessment of intellectually capacity, seen of Specific learning disorder has been tried to minimized throw the application of the intervention strategies for specific learning disability.

Outcome Measures

Completed the all psychological assessment, and got the scored IQ on MISIC was found to be 88, falling in the category of less average IQ on verbal measures was 90, which lies on the just average IQ range and on performance measures it was 87, and in RSPM, his score was slightly above from the score of 25th percentile. Cut off for 25th percentile is 38. Case scored 39. The performance on Intelligence tests show that the intellectual capacities of the case are on the lower side of the average range. Then started screening tools for the helped clear diagnosed this case, that's way applied GLAD, his scored on the percentage of scores obtained, Hindi-45% to 55% Instructional level. English-40% to 50% Instructional levels and Math- below 40% frustration level. Then applied full battery of (NIMHANS) and his

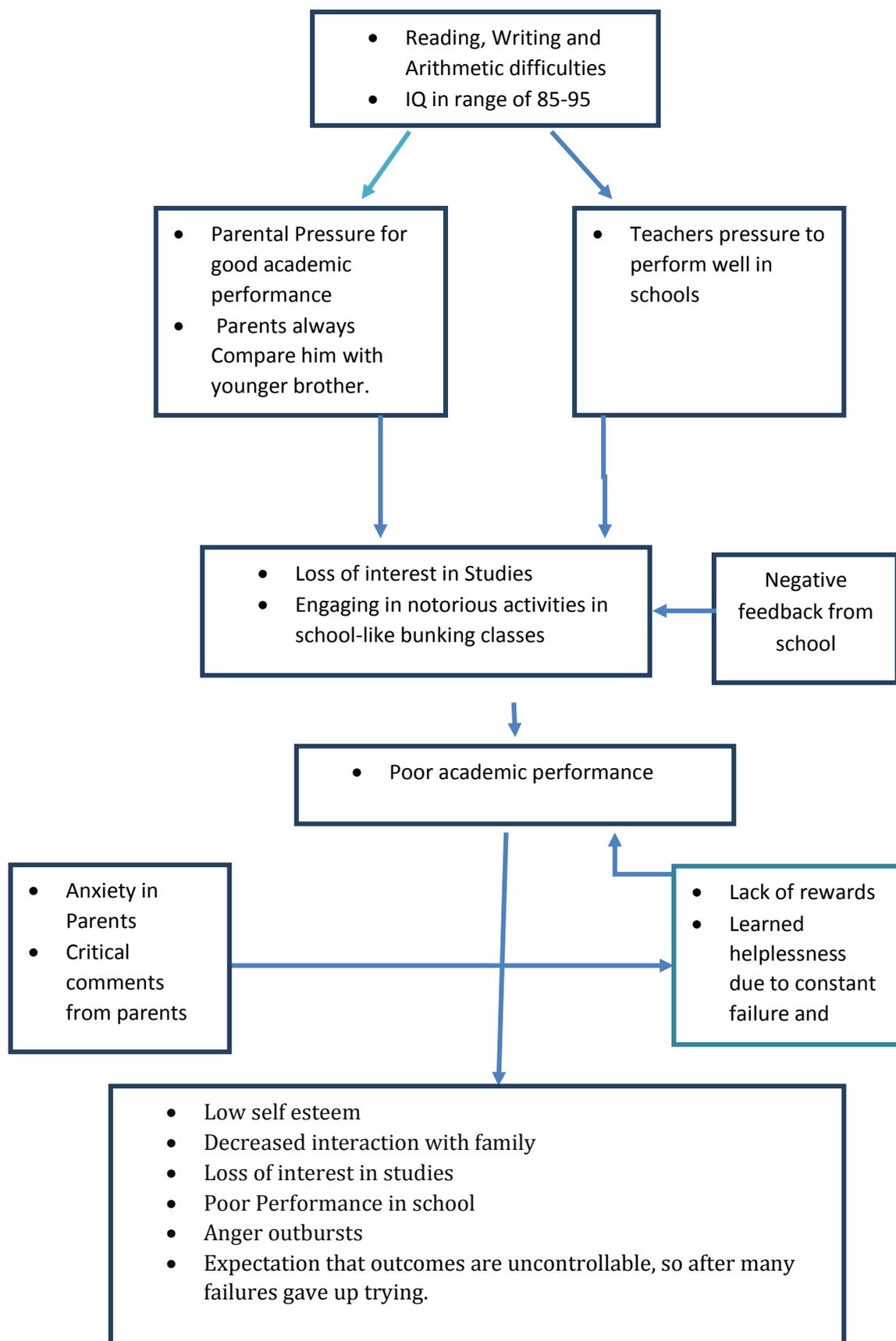
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behavior issues and specific learning disability assessed on following measures (i) Grade level assessment device for children with learning problems in schools. (ii) Psychological Assessment of Children in the Clinical Setting (NIMHANS).1. Developmental Psychopathology Check-List for Children (DPCL). 2. Assessment of Attention and the Profile of Hyperkinetic Children on Psychological Assessment. 3. Assessment of Specific Learning Disabilities. 4. Intervention Strategies for Learning Disabilities. 5. Test of Memory for Children and finally diagnosed Specific learning disability according to ICD-10, and some behavior issues. Pre assessment has been completed, then made formulate case and started intervention. Primary goals removed some mild level issues in the family and child's behaviors issues then started three criteria's problems where be selected according to GLAD, intervention started and called weekly child and his parents. Before intervention made goals and decided long and short term goals, short term goals, Psych-education, Paired Reading, Simultaneous oral spelling, Study skills, Family therapy for the help of child's improves self-confidence and enhances motivation for self-study and made long terms goals and to the improve his academic performance and the to improve his self-confidence, routine with flexibility, structured work activity system, family support, behavior therapy and to modify specific learning processes and behaviors that is maintaining the daily activity in behavior, behavior Therapy for the help of to modify specific learning processes and behaviors that is maintaining the daily activity in behavior. Techniques Used, Psycho-education, Class room management, Academic behavior, Spelling, Reading, Writing, attending to task, Multisensory methods, Gillingham methods, programmed reading, Remedial Reading drills, Neurological Impress methods, Reading Mastery, Cover & Write method, spelling games, teaching arithmetic skills, fraction games, hand writing practice, error monitoring skills, theme writing, reinforcement techniques, contingency management. Behavioral technique such as Parent management training, Token economy, Activity scheduling. Total duration of the sessions 40-50 minutes and total number of the sessions were be probable 20-22 sessions, and target based therapy.

Table no: 2 Significant Target Area of The Therapy

Selected Significant Target Area of The Therapy			
Reading Performance (Hindi Or English)	Writing (Hindi & English)	Arithmetic	
1	Omits a word	Ignore the margin	Errors in place value –units Tens and hundreds
2	substitutes a word	Doesn't maintain left to right orientation	Ignores carry over in addition
3	translated to mother tongue Refuse the answer	Excessive overwriting	Ignores deduction after borrowing in subtraction
4	Question to be repeated more than once	Mixing capital and small letters	Error while transferring from rough to fair work
5	Asks the examiner to pronounce a word for him	No proper space between words, Adds Matras in unwanted places	
6	Ignore punctuation, mispronunciation	Ignore punctuation, Spelling error, Omits Matras, Omits half letters in Hindi	

Psychological Formulation: Table no.1



SESSION 1

Index child came with parents, then started clinically procedure, gradually maintained the rapport and started psychological intervention, taken detailed history and mental status examination were taken from child and his parents. Conversation was carried out to build therapeutic alliance, and informed the next session for detailed evaluation of I.Q and L.D assessment.

SESSION 2

Child came with his parents, then to the parents explained the developmental milestone and also explained the I.Q and L.D assessment, then maintained rapport with the child and started psychological assessment, initially started I.Q assessment, after completed I.Q assessment provided positive reinforcement, and to the parent's informed must take carry books and copy in class then called next session.

SESSION 3

Child came with mother and gradually maintained the rapport and tried to know hobbies, maintained the liking and disliking list, discussed the previous daily activity, friends circle and try to know the interaction with family members. Checked the all subject academic record notes, maintained the rapport and shared the previous experiences with child during academic times and shared the difficulty in reading writing, simple arithmetic calculation, errors in place value units tense and hundred, ignores deduction after borrowing in subtraction, difficulty in hindi, English writing or reading times, showed multiple difficulties such as spelling mistakes, pronunciations problems, substitutes a word during reading in hindi and English, discussed the I.Q assessment report findings, his overall intellectual findings scored 88, menace less average intellectual functioning, and explained the score and informed MISIC interpretation, his verbal IQ came out to be 90 and his performance 87, overall intellectual functioning came out to be 88. His performance on RSPM yielded a score of 39, reflecting less average fluid intelligence of the subject, then psycho education regarding intervention and explained the specific learning disability tools, and completed SLD approximately 4-5 days.

SESSION 4 to 5

Child came and sat comfortably, maintained the rapport, started SLD tools, some difficulties was showed during intervention because some time child was not attentive during the assessment time, seen some difficulties during the assessment such as low interaction, less attentive but gradually completed assessment, SLD completed approximately within 2 sessions, per session taken approximately 45 to 50 minutes. Psycho educated to mother regarding his illness and discussed the assessment process and informed therapeutic session planed the next session called the after 10 days.

SESSION 6 to 8

Child came with mother, initially explained the behavior therapy and used behavior techniques, made behavioral modification, started behavior therapeutic session, psycho educate to the mother related disorder, taken individual session regarding his problems then gradually informed his neurological deficit with help of psycho education, first day started English reading and word meaning, written week name with verbally and written then simultaneously day to day increased task. Applied multi types of behavior techniques and planed the time to time and assigned the homework assignment then called after 3 to 4 days, and when did he came sessions time firstly revised previous sessions and again started next procedure and every psychological session mother's also informed how many time expend

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at home with assigned task and always maintained activity scheduling, used the time to time positive and negative reinforcement and gradually trained whole techniques and performed well with child at home. They followed every instruction and maintained follow-up and he simultaneously performed well.

SESSION 9

Parents came with child and, firstly taken interview to the child alone about 1 hr, during session realized to the child what is your mistake he did not made proper sentences, omits a single word, simple arithmetic calculation, errors in place value units tense and hundred, ignores deduction after borrowing in subtraction, difficulty in hindi, English writing or reading times, showed multiple difficulties such as spelling mistakes, pronunciations problems, substitutes a word during reading in hindi and English, your English Hindi and arithmetic sheet, than started session in English problems, they realized during written time made sentences omits a word such as *Sunday*, during written time omit (*sndy*), during session multiple times revised through the written and memorized, then made sentence (*Sunday*) than again in again practice in note book and learned, same as practiced whole sentences than assigned the home work than maintained the daily activity scheduled and followed them. Mother's revised previous session for the help of assign task. Psychoeducation given before started therapeutic session to child and his mother, than given the general suggestion regarding level of L.D report and instructed about the teacher and school. Support and encouragement from teacher and parents would reinforce & enhance the child's efforts and help build confidence. He could be given responsible roles in school and at home to facilitate an increase in level of self-esteem & leadership qualities. Encourage him to take part in extra-curricular activities is strongly recommended as this would in turn increase opportunities of socializing with children of his age. School support in terms of provisions during exams would help facilitate his progress. These provisions are as follows.

Spelling concessions i.e. overlooking spelling errors, setting realistic goals by parents and teachers would go a long way in the overall personality development of the child. Parents learned also activity scheduling and maintained reinforcement time to time, and then called next session after 6 days.

SESSION 10-17

Child came with Mother; therapy session started with child, before starting the session, previous therapy session's learned material and homework assignment has also been checked in every session. In therapy time given assigned multiple types of mistake such as Ignore the margin, doesn't maintain left to right orientation, excessive overwriting, mixing capital and small letters, no proper space between words, ignore punctuation, spelling error in Hindi and English showed both subject, and reading time showed both subject always omits a word, substitute s a word, Ignore punctuation, mispronunciation, asks the examiner to pronounce a word for him, question to be repeated more than once, question to be translated to mother tongue, refuse the answer. Mother and child came with completed whole task in homework and followed activity scheduling. But some time during session showed significant problems such as temper tantrum, mood swing, poor concentration, crying but simultaneously he performed well in both subject. And learned also arithmetic side by side he performed in math Errors in place value –units Tens and hundreds, Ignores carry over in addition, Ignores deduction after borrowing in subtraction, place value error in multiplication, Place value errors in division, error while transferring from rough to fair work, substitution (of square for rectangle), error in placing decimal points, require assistance in story sums, when did he came learned and practice during therapy session time

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with help of psychotherapeutic techniques, and which do type applied psychotherapy techniques learned mother. Applied paired reading techniques, involved the parents and teacher during reading time, parents and teacher learned during reading time trained to sit with their children and simultaneously read with them until the child is read to read independently, mother learned during this phase, the child's errors are corrected by the mother modeling correct pronunciation of the appropriate word. Once children are ready to read independently, they use a non-verbal signal to indicate that parents should be silent and listen to them reading unaided. When children encounter errors, they use a non-verbal signal to them. They then proceed with independently reading. Mother learned paired reading process, is a packaged set of routines to help parents provided developed of the child's emergent reading skills. Learned also simultaneous oral spelling techniques, during session applied one by one and introducing front of mother and teacher. Both are learned and applied at home and academic. Teacher's also given extra attention in class and applied class room. Simultaneous oral spelling techniques learned a specific word; the child is first given a model word to copy. The child copies the model and concurrently says each letter aloud as it is copied so that visual, auditory and kinesthetic modalities are used simultaneously to learn the spelling, after every trial child was learned and checked, letter by letter and introduced learned Study skills also to mother, these techniques useful active reading and mapping, time management is very importance this technique. Mother came with child, they came after 3 months and maintained previous session task and followed every instruction and maintained follow-up therapeutic sessions, and simultaneously child improved academic performance day by day. In every session revised whole task, and they learned in daily activities, reinforcement provided required to situation.

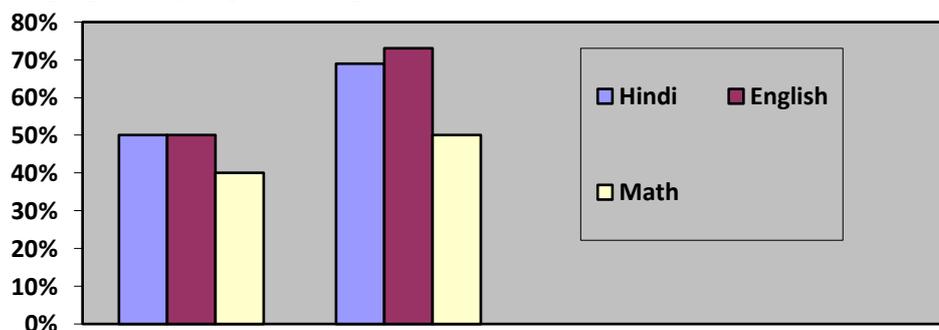
SESSION 18-22

TERMINATION PHASE

All previous session was revised. He was able to perform the task well. He was performing all of these with mild to moderate level perform in academic performance, and he improved self-confidence and performed well at home and school. All target achieved timely. post therapy assessment done.

RESULTS

To assess the difference between pre and post level of improvement target area according to GLAD were selected. His score in Hindi was 40-69% (instructional level), English 73% (Independent level) and Math 50% (Independently) Level indicated. The improvement obtained is graphically depicted as given below:



Pre and Post assessment percentage score graph

Table:(3) Difference between pre and post intervention

DISCUSSION

The aim of this case study is to the effect of psychological strategies of the person with specific learning disorder. The findings suggested that on three outcome measures bases of GLAD Hindi, English, Math. He performed after intervention strategies well, in GLAD screening devices percentage high after taken intervention which further were either maintained or even further deceased on follow up sessions suggestive of the effectiveness of behavior therapy techniques for some mild level issues of behavior problems and Intervention Strategies for learning disabilities for Specific learning disabilities. Some theories are connected to the help and support for the results are in agreement with other case studies of learning disability with help of intervention strategies for learning disability (John et al.1967; Mann,1979; Brady et al. 1988; Rozario, 1991; Sheldon et al.1952;Carrillo, 1976; Myklebust 1967; Maughan, 1995; Snowling, 1996; Vellution, 2002; Fletcher, Snowling et al, 2004; Vellutino et al., 2004; Rutter et al,1975).

Some students, however, deviate so greatly from normal limits that the regular class room teaching is inadequate. Special needs of these students must be met with additional inputs from outside the regular class rooms. These children may have difficulties in one or several of the academic areas such as reading, arithmetic, spelling and writing. Some others are merely slow in acquiring school related skills. A few, besides some families and behavior issues of mild level. Child had academic problems were heterogeneous group. Theoretically they may have (i) academic discrepancy (ii) Cognitive problems (iii) biological correlates and (iv) Social emotional problems. I have been changed the concept about the reading writing, arithmetic, language issues, pronunciation, behavior and social conflict, reduced the conflict some families.

CONCLUSION

Index child's problems of poor academic performance, poor handwriting, difficulty in reading writing, written expression showed disorganized content matter, and low performance in math task, low self-confidence was improved with therapy. Now child is able manage himself and able to facing academic performance and improved self-confidence.

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Conflict of Interest

The author declared no conflict of interest.

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