

A COMPREHENSIVE EVALUATION OF THE INTELLECTUAL AND PSYCHOSOCIAL PROFILE IN CHILDREN WITH LEARNING DISABILITY: A CASE ANALYSIS

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Abstract

The present study is an attempt to explore the potential problems encountered by an adolescent boy with learning disability. It outlines difficulties in areas of communication, social, intellectual and behavioral domains. Teacher, parent and child reports were used to obtain quantitative and qualitative understanding of underlying issues. Stress factors were identified that contributed to the problems experienced. An individualized home program to enhance learning, social and communication skills were designed and the child was re assessed six months after intervention. The home program was observed to be an effective one, since there were significant improvements in all areas. We found that academic involvement and self-esteem also was better as a result of sustained use of assistive techniques that were suggested.

Keywords: *Mid adolescence, transitioning, education, individualized program, disability*

Introduction

Learning disability, sometimes called a learning difference, is a classification including several disorders in which a person has difficulty learning in a typical manner, usually caused by an unknown factor or factors. The National Joint Committee on Learning Disabilities (NJCLD) defines the term "learning disability" as a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. cultural differences, insufficient/inappropriate instruction, psychogenic factors) it is not the direct result of those conditions or influences.

Learning disabilities fall into broad categories based on the four stages of information processing used in learning: input, integration, storage, and output. Information is perceived through the senses, such as visual and auditory perception and difficulties with visual perception can cause problems with recognizing the shape, position and size of items seen. In children with learning disabilities, there can be problems with sequencing, which can relate to deficits with processing time intervals or temporal perception. There can be problems with auditory perception that makes it difficult to screen out competing sounds in order to focus on one of them, such as the sound of the teacher's voice. Some children appear to be unable to process tactile input. For example, they may seem insensitive to pain or dislike being touched. Children with learning problems may experience problems with integration as well. This is the stage during which perceived input is interpreted, categorized, placed in a sequence, or related to previous learning. Students with problems in these areas may be unable to tell a story in the correct sequence, unable to memorize sequences of information such as the days of the week, understand a new concept or unable to generalize it to other areas of learning. In other words they fail to see the "big picture." A poor vocabulary may also contribute to problems with comprehension. Problems with memory can occur with short-term, working memory or with long-term memory. Most memory difficulties occur in the area of short-term memory, which can make it difficult to learn new

material without many more repetitions than is usual. Difficulties with visual memory can impede learning to spell. Finally, there can be also problems when information is expressed through words, language, or through muscle activity, such as gesturing, writing or drawing. Problems with language output can create demands on spoken language and in answering questions. Retrieving information from stored memory, organizing thoughts, and putting thoughts into words becomes difficult. It can also cause trouble with written language for the same reasons. Difficulties with motor abilities can pose problems for gross and fine motor skills. Individuals with gross motor difficulties may be clumsy, prone to stumbling, falling, or bumping into things. They may also have trouble running, climbing, or learning to ride a bicycle. People with fine motor difficulties may have trouble buttoning shirts, tying shoelaces, or with handwriting.

Currently, almost 2.9 million school-aged children in the United States are classified as having specific learning disabilities and receive some kind of special education support. In India 12-13 percent of children are identified to be having learning disability (Thacker, 2007). Even if children with learning disability receive quality interventions during their early years, in all likelihood, their disability will endure into adolescence and adulthood. The need for equally effective intervention strategies for these older individuals is as great as, if not greater than, the need for interventions for younger children because of all the emotional overlays that generally emerge as individuals mature and continue to encounter significant failure. During the last decade, the awareness of these children's behavioral, social, and emotional problems have considerably increased. This was demonstrated by Bender and Smith's (1990) meta-analysis that explored the relation between learning disability and behavioral problems and Kavale and Forness's (1996) meta-analysis of investigations of the relation between learning disability and social skill deficits. Both meta analyses provided convincing evidence that children and adolescents with learning issues experience social problems (e.g., low self-esteem), emotional difficulties (e.g., depression), and conduct problems (e.g., aggression).

In this study we seek to explore the hypothesis that learning disability affects the social skills, emotional adjustment and also the behavior of the child. Secondly we explore if a child with learning disability be taught to use complex learning strategies and thirdly we examined if the strategies resulted in improved performance in academic profile, behavior, social and communication skills.

Method

1. The Wechsler Intelligence Scale for Children (WISC): This test was developed by Dr. David Wechsler and is an individually administered intelligence test for children between the ages of 6 and 16 years. The WISC takes 65-80 minutes to administer and generates an IQ score which represents a child's general cognitive ability. There are four indexes namely the verbal comprehension, perceptual reasoning, working memory and the processing speed index. The full scale IQ ranges from lowest 40 to highest 160 points. The verbal comprehension index assesses children's ability to listen to a question, draw upon learned information from both formal and informal education, reason through an answer, and express their thoughts aloud. It can tap preferences for verbal information, a difficulty with novel and unexpected situations, or a desire for more time to process information rather than to decide on the spot. This index is a good predictor of readiness for school and achievement orientation, but can be influenced by background, education, and cultural opportunities. The perceptual reasoning index assesses the child's ability to examine a problem, draw upon visual-motor and visual-spatial skills, organize their thoughts, create solutions, and then test them. It also taps preferences for visual information, comfort with novel and unexpected situations, or a preference to learn by doing. The working memory index assesses the child's ability to memorize new information, hold it in short-term memory, concentrate, and manipulate that information to produce some result or reasoning processes. This is important in higher-order thinking, learning, and achievement and this taps concentration, planning ability, cognitive flexibility, and sequencing skill, but is sensitive to anxiety too. It is an important component of learning and achievement, and the ability to self-monitor. Finally, the

processing speed index assesses abilities to focus attention and quickly scan, discriminate, and sequentially order visual information. It requires persistence and planning ability, but is sensitive to motivation, difficulty working under time pressure, and motor coordination too. Cultural factors seem to have little impact on it. This test is also related to reading performance and development.

2. The Vineland social maturity scale (VSMS): An Indian adaptation of the Vineland Social Maturity Scale was used to assess children aged 0-16 years in the areas of self-help general, self-help dressing, self-help eating, self-direction, locomotion, communication, occupation and socialization. The scale yields a social age and a social quotient, which can be considered an approximate intelligence quotient.

3. Draw-your-family test: The child was given a sheet of paper, pens, and crayons to draw a picture of his family. This projective test is subjectively analyzed to understand family cohesion, conflicts and how the child perceives his relationship with family members. The child is then asked to give a brief description of his work. Inferences are verified with both parent and teacher reports to ensure objectivity. The therapist will have to interpret the drawing based on the colors used in the picture, spacing and how the child projects himself.

4. Scheduled interviews: There were specially designed short questionnaires that were used to gather information regarding school, home and peer environment. All questions were opening ended and non-confronting and sessions during assessments were confidential. Interviews held with the child focused on his perception of the difficulties, what he expected from himself and how he was going to make an improvement.

5. Connors Parent Rating Scale: This instrument is used for routine screenings in schools, mental health clinics, residential treatment centers, pediatric offices, juvenile detention facilities, child protective agencies, and outpatient settings. The test can help in measuring hyperactivity in children and adolescents through routine screening, providing a perspective of the child's behavior from those who interact with the child on a daily basis, in establishing a base point prior to beginning therapy and to monitor treatment effectiveness and changes over time. This test provides valuable structured and normed information to further support conclusions, diagnoses, and treatment decisions when the parent, teacher, and self-report scales are combined. The test contains 27 items and covers a subset of subscales namely the oppositional, cognitive problems or inattention, hyperactivity and the ADHD index.

6. Connors Teacher Rating Scale: The short form for teachers contains 28 items. The scale should be used when time is of the essence and when multiple administrations over time are desired. The scales include the oppositional domain, cognitive problems or inattention, hyperactivity and the ADHD index.

Results and discussion

On the verbal quotient, a score of 75 was obtained that indicated "border line" intellectual functioning on the WISC. He had good vocabulary, as he understood meanings of words, and used them in appropriate sentences. On the general information subtest, he had difficulties explaining definitions and did not know answers to questions such as "who was Columbus?" or "what is photosynthesis?". He otherwise had good comprehension abilities and was able to reason adequately to questions such as "what would you do if you got lost? Or "what would you do if you found a crying baby on the roadside?". He explained similarities and differences between objects based on their color, size, shape and texture. Expressive language was good and he had no difficulties in pronunciation but was however slow in conservation and at times needed probing. Mental arithmetic was difficult for him as he was used to making calculations on paper or by using fingers to count.

On the performance tests, the child obtained a score of 85 indicating a "dull normal" level of intellectual functioning. Though he enjoyed doing the performance tests, he found it difficult to complete it within the stipulated time. On the geometric design test, he arranged blocks according to

the picture. There were no reversals in design or difficulty with pattern alignment. His visual motor coordination was age appropriate. On the subtest of picture completion, he was prompt in identifying missing parts and while doing the coding test, he had writing difficulty that was evident. He was slow, applied more pressure in writing and made a few mistakes. However, there were no reversals in copying. Conte and Andrews (1993) and Spafford and Grosser (1993) claimed that neurological defects creates difficulty in comprehending written language and this could also underlie problems in understanding nonverbal communication. On the picture-sequencing subtest, he arranged them in the correct order as expected but as items increased in their complexity he faltered. The last test on object assembly was once again difficult for him, as he had to arrange puzzles. He took a long time to finish and repeatedly needed encouragement.

On the Vineland Social Maturity Scale (VSMS), the child obtained a social age score of 10 years while his chronological age was 13 years. His social age was age appropriate on domains such as eating, dressing, locomotion and occupation. Problems were present in understanding social cues, communication and in the self-direction domains. There is a delay of three years in his social skills and according to studies, children and adolescents with learning disabilities are less sensitive to the social meanings of gestures and facial expressions and have more difficulty discriminating vocal tones (Holder & Kirkpatrick, 1991; Sisterhen & Gerber, 1989). This lack of sensitivity could seriously undermine social interactions in individuals with learning disability. Oliva and La Greca (1988) suggested that the interpersonal problems in those with learning disability may be viewed as the consequence of an impaired ability to attain and apply metacognitive rules and strategies. Parril-Burnstein (1981) found that children with learning disability tended to produce less varied and more rigid coping strategies as they are unable to adapt appropriate cognitive strategies to different social situations. They have difficulty in organizing spontaneous and efficient strategies that are directed to the achievement of social goals (Gerber, 1983).

Interesting findings were revealed from analyzing the draw-a-family-test. There were no expressions on the faces depicted. Every member of the family was placed distant from each other. There was also no expression of attachment to any significant family member. The colors used were dull and not lively and the drawing was too plain and simple with no additional creativity. When asked to describe it, he referred to his own portrait but said nothing significant. He did not express any sense of belongingness or affection toward anyone. This was evident even in his behavior during the sessions. The father figure in the picture depicted appeared larger and more prominent, probably due to his dominant role.

Scheduled interviews revealed distress in both parents and the child. Parents were seen to be having high expectations from the child. Demanding parenting style was being followed. They also admitted having sent the child for tuitions and remedial classes after school every day. The family had not been spending adequate time together, lacking social experiences and there were immense societal pressures. Interview schedule sessions for the child revealed that he had difficulty coping in school. He expressed that he was frequently singled out in class, made fun of and that he was made to feel "different". Gresham and Elliot (1989) pointed to research that showed children with learning disability achieve less peer acceptance (Gresham & Reschly, 1987; Haager & Vaughn, 1995; Kistner & Gatlin, 1989) and therefore may have fewer opportunities to engage in social interaction and to accumulate social experiences that form the basis for interpersonal understanding. He particularly felt misunderstood at home, since his parents were concerned about his academic work and spared less time discussing other issues. The child expressed that most of his childhood was being lost and that studies was becoming too cumbersome. It was evident that he did not pride himself in any ability that he had and there was no time for extra curricular activities. He also felt that he had too few friends in the school and neighborhood.

According to the Connors parent rating scale, the child obtained high scores on hyperactivity and inattention subscales although he did not fulfill the ADHD index. Parents admitted that the child finds it difficult to sustain attention while learning and that he allows himself to be distracted. They also

mentioned that he does not complete academic work and that most often it is messy. The Connors teacher rating scale revealed that he scored high on oppositional, hyperactivity and the inattention subscales. Telephone conversations with the teacher made it easier to substantiate findings. She reported that the child frequently daydreamed, appeared lost in class and distracted other children. Gresham (1984) reported that in many studies teacher reports of the child's behavior was highly reliable. Cornwall and Bawden (1992) reviewed a large number of studies of the relation between learning disabilities and behavioral difficulties and concluded that learning disabilities are associated with aggression and misconduct in the classroom.

We planned an individualized education program to help the child improve his academic performance, classroom behavior, social and communication skills. We suggested the use of assistive technology at home and school. Research has shown that distinct and unique roles played by both the therapist and the teacher in teaching adolescents with learning disability, provide students with a continuum of literacy instruction across the different classroom settings they encounter and success can follow. When role integrity is compromised, so are student outcomes (Lenz, Deshler, & Kissam, 2004). Using animated software can enhance reading and spoken language, specifically phonetics. Typing may also reduce the burden of having to write long answers. The family was encouraged to get the school involved in laying down rules for evaluation during exams, by giving special question papers that may have one word, choosing the right answers or even matching. Videos on science, English and arithmetic subjects were suggested to instill interest and to make learning easier. To develop vocabulary, we encouraged the family to read to him every day and to help him narrate experiences that he enjoyed. To develop number skills, we suggested the use of experience-based learning, games and special software that was locally available. Swanson and Deshler (2003) studied that several interventions were effective when provided in a methodologically sound manner. The academic deficits that majority of adolescents with learning disability face are so substantial and the instructional time is so limited, that it is imperative that the instruction these learners receive address the skills and strategies that are centrally related to their future success in demanding high school curricula. Peer learning was also suggested to increase social skills and to instill self-confidence. The family was encouraged to give the child small responsibilities at home and at school such as watering the garden, feeding his pet or cleaning the house. Appropriate reinforcements were chosen by parents to motivate him. We discussed ways to reduce the tuition hours and by providing him simple worksheets on the lessons taught everyday in school to improve working memory. The child was also encouraged to use highlighters while reading and to listen to audio and visual aids to improve reading and listening comprehension. These suggestions were to be executed for 6 months after which there would be a monitoring of his intellectual and psychosocial profile.

Post intervention, the WISC on repetition showed an improvement on verbal and performance tests. He obtained a score of 77 for the verbal quotient and 88 on the performance tests. Though there cannot be a change in the IQ level, we still identified that there was observable improvement in significant areas. There was an increase in understanding of words and semantics of language. There was an improvement in math concepts as he answered mental word problems with less difficulty. When asked to explain the differences and similarities of objects, he did it considerably well. On the performance tests, his speed of execution of the task particularly improved. On the VSMS, his social age improved from 10 to 11 years. Behaviorally he appeared calmer and confident. The Connors parent and teacher report revealed that there was lesser incidence of inattention, hyperactivity and oppositional behaviors. He was also beginning to take interest in academic work and parents reported that they had been consistent in using assistive techniques at home and school. Having made provisions to reduce the burden on academic work, the family had been able to spend more quality time with the child and plan for more social opportunities. Peer learning had also enabled the child to build relationships. He had begun doing simple tasks at home and liked it when he was appreciated or reinforced.

Conclusion

Learning disability is not a disease or a disorder but can be overcome with appropriate support and care. Assessments done must be both qualitative and quantitative and all information pertaining to the child must be carefully recorded. Sessions must ensure confidentiality and interventions planned must be a joint effort of the parents as well. The school must be encouraged to share responsibilities of evaluation procedures and also providing necessary assistive techniques. Home programs have to be tailored to suit the need of the child and every suggestion given must be carefully speculated on. The profile of the child's intellectual, behavioral, communication and social skills will need to be reassessed periodically. Therefore, helping a child is not just finding solutions to problems but by continually supporting the family and the child in implementing it the right way.

References

1. Bender, W. N., & Smith, J. K. (1990). Classroom behavior of children and adolescents with learning disabilities: A meta analysis. *Journal of Learning Disabilities*, 23, 298-305.
2. Conte, R., & Andrews, J. (1993). Social skills in the context of learning disability definition: A reply to Gresham and Elliot and directions for the future. *Journal of Learning Disabilities*, 26, 146-153.
3. Cornwall, A., & Bawden, H. N. (1992). Reading disabilities and aggression: A critical review. *Journal of Learning Disabilities*, 25, 281-288.
4. Gerber, M. M. (1983). Learning disabilities and cognitive strategies: A case for training or constraining problem solving? *Journal of Learning Disabilities*, 16, 255-259.
5. Gresham, F. M., (1984). Social skill and self-efficacy for exceptional children. *Exceptional Children*, 51, 253-261.
6. Gresham, F. M., & Elliott, S. N. (1989). Social skills deficits as primary learning disability. *Journal of Learning Disabilities*, 22, 120-124.
7. Gresham, F. M., & Resd-dy, D. J. (1987). Sociometric differences between mildly handicapped black and white students. *Journal of Educational Psychology*, 79, 195-197.
8. Haager, D., & Vaughn, S. (1995). Parent, teacher, peer, and self-reports of the social competence of students with learning disabilities. *Journal of Learning Disabilities*, 28, 205-215.
9. Holder, H. B., & Kirkpatrick, S. W. (1991). Interpretation of emotion from facial expressions in children with and without learning disabilities. *Journal of Learning Disabilities*, 24, 170-177.
10. Kavale, K. A., & Forness, S. R. (1996). Social skill deficits and learning disabilities: A meta-analysis. *Journal of Learning Disabilities*, 29, 226-257.
11. Kistner, J. A., & Gatlin, D. (1989). Correlates of peer rejection among children with learning disabilities. *Learning Disability Quarterly*, 12, 133-140.
12. Lenz, B. K., & Deshler, D. D. (2005). Adolescents with learning disabilities: Revisiting the educator's enigma. In B. Y. Wong (Ed.), *Advances in learning disabilities*. New York: Guilford.
13. National Dissemination Center for Children with Disabilities (NICHD), 2004.
14. Oliva, A. H., & La Greca, A. M. (1988). Children with learning disabilities: Social goals and strategies. *Journal of Learning Disabilities*, 21, 301-306.
15. Parril-Burnstein, M. (1981). *Problems solving and learning disabilities: An information processing approach*. New York: Grune & Stratton.
16. Thacker, N. (2007). Poor scholastic performance in children and adolescents. *Indian pediatrics*, 44: 411-412.
17. Sisterhen, D. H., & Gerber, P. J. (1989). Auditory, visual, and multisensory nonverbal social perception in adolescents with and without learning disabilities. *Journal of Learning Disabilities*, 22, 245-249.

18. Spafford, C. S., & Grosser, G. S. (1993). The social misperception syndrome in children with learning disabilities: Social causes vs. neurological variables. *Journal of Learning Disabilities*, 26, 178-189.
19. Swanson, H. L., & Deshler, D. D. (2003). Instructing adolescents with learning disabilities: Converting meta-analysis to practice. *Journal of Learning Disabilities*, 36(2), 124-135.

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