ASSESSING ADOLESCENTS WITH LEARNING DISABILITY AND PLANNING A WHOLISTIC INTERVENTION: A CASE ANALYSIS

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ABSTRACT:

The present study seeks to outline a wholistic assessment method that was used in understanding problems experienced by an adolescent boy. Quantitative and qualitative assessments were done to identify cognitive and psychosocial problems. Parent, teacher and child’s reports were used in obtaining essential information. We developed intervention strategies using parents as co-therapists. An individualized educational program was designed and assistive techniques were suggested. We reassessed the child after six months to understand the effectiveness of the intervention. Findings suggested that there was an overall improvement in academic performance, social and communication skills. These are important implications for practitioners as learning disability can be managed successfully with the help of specially designed individual programs.

Keywords: Adolescence, disability, psychologist

Introduction

Learning disability is best described as a disorder in which one or more of the basic psychological processes involved in understanding or in using language, spoken or written manifests itself as an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. This includes conditions such as perceptual disabilities, brain injuries, minimal brain dysfunctions, dyslexia and developmental aphasias. However it does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, mental retardation, emotional disturbance, or environmental, cultural, or economic disadvantages (Individuals with Disabilities Education Act, 1999).

The most common learning disability is developmental dyslexia that accounts for nearly 70%-80% of cases. This is characterized by deficits in reading and is most often termed as a reading disability. This can affect any part of the reading process, including difficulty with accurate or fluent word recognition, or both, word decoding, reading rate, prosody (oral reading with expression), and reading comprehension. Before the term "dyslexia" came to prominence, it
was used to be known as "word blindness". Common indicators of reading disability include difficulty with phonemic awareness (the ability to break up words into their component sounds) and difficulty with matching letter combinations to specific sounds (sound-symbol correspondence). Impaired written language ability may include impairments in handwriting, spelling, organization of ideas, and composition. This term was used as an overarching term for all disorders of written expression. Others, such as the International Dyslexia Association, have used the term "dysgraphia" exclusively to refer to difficulties with handwriting only. Sometimes called dyscalculia, a math disability can cause such difficulties as learning math concepts, such as quantity, place value, and in understanding the concept of time. It may also characterize difficulties in memorizing math facts, difficulty organizing numbers, and understanding how problems are organized on a page. Dyscalculic children are often referred to as having poor "number sense". There can be another type of a learning disability called the nonverbal learning disability. This often manifests as motor clumsiness, poor visual-spatial skills, problematic social relationships, difficulty with math, and poor organizational skills. These individuals often have specific strengths in the verbal domains, including early speech, large vocabulary, early reading and spelling skills, excellent rote-memory and auditory retention, and eloquent self-expression.

Learning disabilities are often identified by school psychologists, clinical psychologists, and neuropsychologists through a combination of intelligence testing, academic achievement testing, classroom performance, and social interaction and aptitude. Other areas of assessment may include perception, cognition, memory, attention, and language abilities. The resulting information is used to determine whether a child's academic performance coincides with his or her cognitive ability. The most commonly used comprehensive achievement tests include the Woodcock-Johnson III (WJ III), Weschler Individual Achievement Test II (WIAT II), the Wide Range Achievement Test III (WRAT III), and the Stanford Achievement Test–10th edition. These tests include measures of many academic domains that are reliable in identifying areas of difficulty.

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 fact, over half of all children who receive special education have a learning disability (24th Annual Report to Congress, 2002). Past investigations of children with learning disabilities had focused mainly on children's cognitive and learning problems and on interventions designed to ameliorate these problems (Bryan, 1974). In India 12-13 percent of children are identified to be having learning disability (Thacker, 2007). However, during the last decade, the awareness of these children's behavioral, social, and emotional problems have considerably increased. This awareness was demonstrated by Bender and Smith's (1990) meta-analysis that explored the relation between LD 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 LD affects the social skills, emotional adjustment and also the behavior of the child.
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. Subtests are given for additional examination of processing abilities. 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. Drawing-a-family test: This is a projective test that is used to subjectively analyze the child’s perception of his relationship with his family. From the picture that a child draws, it is possible to make interpretations about his attachment patterns, underlying conflicts in relationships and family cohesiveness. Inferences about the picture depicted would be verified with parent perceptions 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 in it.

4. Scheduled interviews: There were specially designed short questionnaires that were used to gather information regarding school, home and peer environment. All questions were open ended and non-confronting and sessions during assessments were confidential. Parents were given
opportunities to discuss difficulties they encountered, how they perceived the child’s ability and what they intended to do about it. Interviews held with the child focused on his perception of the difficulties, what he expected from himself and how he was going to make a difference. Debriefing was done every time an session was completed. Parents were reassured that assessment was not a diagnostic tool but was done only to gather information about the child.

5. The Connors Parent Rating Scale (CPRS)- 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 (CTRS): 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.

7. Sleep, Diet and Mood Checklist: These were not standardized checklist but were used to screen for problems in sleep, feeding patterns and also in the orientation of the child. Parents were the informants.

Results and discussion

On the verbal tests of WISC, the child obtained a score of 70 indicating a “borderline” intellectual level of functioning. He had a good vocabulary, understood meanings of words used in grammatically correct sentences. On the general information subtest, he did not know answers to questions such as “what is photosynthesis?” or “what is hieroglyphics?” and therefore kept guessing and turning to his parents for help. His comprehension was adequate for his age as he was able to reason to questions such as “what would you do if you got lost?” or “what would you do if you lost your friend’s ball?”. He also answered questions on similarities between objects by relating to their sizes, shapes and colors and therefore had good association skills. His expressive language was good and he had no difficulties in pronunciation but was however slow in conservation and at times needed probing. Word problems in arithmetic were easy at first, but when complexity in calculating mentally increased, he faltered.

On the performance tests the child obtained a score of 84 indicating a “Dull normal” intellectual functioning. He executed most timed activities well and appeared to be motivated while performing it. On the geometric design test, he had to arrange blocks as seen in the picture. We observed no difficulty in visual spacing or in organization skills as he arranged the blocks according to design. On the subtest of picture completion, he was prompt in identifying missing parts and on the coding subtest which was a writing activity, he represented numbers as symbols. We observed that his writing was slightly messy and that he was slow. There were however no
letter reversals, omissions or deletions. 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. Though the child had no specific writing difficulty he was slow and needed prompting. On the sequencing subtest, he had to arrange pictures in the correct order but as items increased in their complexity, there was confusion that was clearly evident. He particularly found puzzles difficult to complete on the object assembly subtest.

On the Vineland Social Maturity Scale (VSMS), the child obtained a social age score of 11 years while his chronological age was 13. 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. We see that there is a delay of two 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. Parrill-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-your-family. The depicted no facial expression in himself or the parents. No bright colors were used and the drawing was very plain and dull. He seemed to be emotionally attached to his mother, since he drew his image closer to her. The father figure appeared larger and more prominent in the picture. The drawing lacked excitement and liveliness and when asked to describe it he narrated very little.

Scheduled interviews revealed that parents were distressed. They had high expectations from the child and both parents accepted that their child disappointed them. Societal pressures were evident in discussions and parents though initially hesitated discussing much, they gradually warmed up. Reluctance was also present when they were told that the child’s difficulties need to be discussed with the teacher. Time and again the family was reassured that this is only to help the child and not to discriminate him from other children. Scheduled interviews also revealed hidden fears that parents had about the child’s future, the grades that needed to secured and also about his occupation. They were pessimistic about how he would be able to perform in school and whether the authorities would be supportive enough. Scores on the WISC and the VSMS were discussed and parents were given time to ask their queries. They were helped to see the child’s strengths and to understand areas that he found difficult. Having understood the meaning of scores, parents were given time to set realistic objectives and to plan for intervention. A home program was designed in keeping with their expectations but having made it clear that improvement can be seen only as a gradual process and that input must be sustained.

Similar interview schedule sessions with the child revealed that the child was anxious. He expressed his concerns in coping in the classroom as he was unable to copy, write or do arithmetic calculations to the pace that others did. He especially felt singled out in class and expressed that the teacher was unable to give him the required attention. He felt misunderstood at
home, since his parents were concerned about his academic work and spared less time conversing with him. He said that the long tuitions hours caused more fatigue and disinterest in going to school. The child admitted that most of his childhood was being lost and that studies was becoming too cumbersome. He clearly did not pride himself in any ability that he had and was concerned that there was no time for extra curricular activities. He felt that he had too few friends in school and the neighborhood. The family had also not provided him adequate social experiences.

Teacher reports of classroom behavior were obtained by telephone conversations. According to Gresham (1984), teacher’s reports in many studies were found to be highly reliable. According to reports the child was quiet and shy in the class and he found it difficult to converse in a group. Gresham and Elliot (1989) pointed to research that showed that 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. The teacher also stated that the child frequently became inattentive and unresponsive. 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.

On the Connors Parent Rating Scale the child low scores on hyperactivity but high scores on inattention and cognitive problems. He however 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. According to them they felt that the child had needs in comprehending written information and that he takes a long time in reading. The Connors Teacher Rating Scale revealed that he scored low on oppositional, but high on the 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 also 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.

The sleep, diet and mood checklists revealed no significant disturbances. The child had stable emotions and coped reasonably well at home and school. There were no patterns of disturbed sleep or bed wetting behaviors. The child neither overate nor was obese. He had healthy diet patterns but parents reported that the child often complained of fatigue.

We planned an individualized home program that would help the child develop reading, writing and arithmetic skills. We suggested the use of computers that would reduce the burden on writing. The child could type his answers instead of using the notebook to write. We also discussed with parents whether they considered the use of assistive technology in helping him learn. Videos on science, english and arithmetic subjects were suggested so as to instill interest and to also make learning easier. To develop vocabulary, we encouraged the family to read to him and ask simple questions. They could also teach him five new words everyday and help him use it in meaningful sentences. To develop narrational skills, we suggested that the family could encourage the child to talk about an incident or an experience that he found pleasurable. Peer learning was also suggested to increase social skills and also to instill self confidence in the child. The family was encouraged to give him small responsibilities at home and at school such
as watering the garden, feeding his pet or cleaning the house. Appropriate reinforcements were chosen so as to motivate him. We also discussed on ways to reduce the tuition hours and to enable to the teacher to become more involved in helping the child by providing simple worksheets of the lesson taught everyday. This would help the child improve his working memory. We suggested the use of highlighters while reading and to also listen to audio and visual aids to improve reading and listening comprehension. Experience based learning was suggested to understand concepts in arithmetic. These suggestions were to be executed for 6 months after which we would once again monitor the child’s cognitive and psychosocial profile.

Post intervention, the WISC on repetition showed an improvement on verbal and performance tests. The child obtained a score of 73 for verbal quotient and 84 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. He was good with his vocabulary, expressed well in grammatically correct sentences and showed improvements in understanding concepts in arithmetic. He also explained differences and similarities of objects better than his first attempt. On the performance tests, the speed of executing a task had particularly improved. On the VSMS, his social age improved from 11 to 12 years and behaviorally he appeared more confident and fulfilled. The Connors Parent Scale revealed that he had low scores on inattention and improved scores on the cognitive subscale. 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 also plan for social opportunities. The Connors Teacher Rating Scale revealed that scores on hyperactivity and inattention had improved. Telephone conversations with the teacher revealed that the child was taking interest in academic work and that he appeared much more comfortable in class. Peer learning had also enabled him to build relationships with other children and to also enjoy the experience of learning. Taking up small responsibilities at home had made the child feel proud of his abilities and improved his self esteem.

Conclusion

Learning disability is neither a disease nor a disorder but can be overcome with appropriate support and care. The primary focus is that we should focus on the child and not the problem. We should help parents realize that they need to take the responsibility in guiding their child in his journey of discovering himself. Assessments used must able to provide objective and reliable information regarding the potential of the child and not as diagnostic labels. Individualized education programs have to be tailored to suit the need of the child and parents need to be active co-therapists. It is also important that we liaison with teachers and significant school authorities without whom the use of assistive technology is futile. The profile of the child’s behavior, communication and social skills will also have to be monitored carefully and 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


