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Co-Morbidities And Specific Learning Disability

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ABSTRACT

This paper examines the presence of specific learning disabilities SLD, which includes Attention Deficit Hyperactivity Disorder, Anxiety Disorder, Conduct Disorders, Tic Disorders, Tourette's Syndrome, Developmental-linguistic and motor coordination disorder and Depression observed in students. Their symptoms and how a teacher in general can identify these types of children in the class room and further referred to the professional help to cure efficiently, so, they can lead normal life and can become active in learning process by using one's full cognitive involvement.

Definition of Co-morbidity: Co-morbidity is a situation where two or more conditions that are distinguishable from one another tend to occur together affecting the situation as a whole.

The exact nature of the relationship between co-morbid conditions is a matter of debate in the research literature. It is particularly difficult to determine whether one condition is in fact a symptom of the other, casualty versus correlation.

Data from various sources associate a number of neuro-developmental disorders with specific learning disability. Some of them are:

A. Attention deficit hyperactivity disorder (ADHD)
B. Anxiety disorders
C. Conduct disorders like oppositional defiant disorder, school phobia
D. Tic disorders and Tourette's Syndrome
E. Developmental-linguistic and motor coordination disorder
F. Depression

A. Attention Deficit Hyperactivity Disorder (ADHD)

The longest body of study supports a co-morbid relationship between learning disabilities and attention deficit disorder (with or without hyperactivity).

Attention Deficit Hyperactivity Disorder (ADHD)

Behavioral manifestations of ADHD depend somewhat on the settings in which they are observed. Some children appear inattentive, hyperactive and impulsive with parents, teachers or peers. Others appear to show disturbed behavior in only one setting and are said to show situational ADHD.

Three types of ADHD are identified which are as follow:

- **Predominantly hyperactive-impulsive type (that does not show significant inattention)**
- **Predominantly inattentive type** (that does not show significant hyperactive-impulsive behavior) sometimes called ADD—an outdated term for this entire disorder.
- **Combined type** (that displays both inattentive and hyperactive-impulsive symptoms)

Hyperactivity:

The motor problems of ADHD involve both excess and inappropriate activity. They are always on the run, restless, fidgety, and unable to sit still.

Impulsivity:

The essence of this is a deficiency in inhibiting behavior that manifests as acting without thinking.

Attention Deficit:

The attention problems show up in various ways. The children skip rapidly from one activity to another and do not pay attention to what is said to them. Two types of attention are affected, namely selective attention, ability to attend to relevant environmental stimuli and sustained attention referring to paying attention to a task over a period of time. Off task behavior in school and at home could reflect problems in sustaining attention.

ADHD is now well established as a genetic, neuro-biochemical and developmental disorder for which both the Diagnostic and Statistical Manual of Mental Disorder and the International Classification of Disease have clear criteria.

Criteria for diagnosis of ADHD

(1) **Inattention:** It is found that out of 9, six or more symptoms of inattention have sustained to an extent of maladaptation and inconsistency developmental level for at least 6 months.

(2) **Hyperactivity-impulsivity:** 6 or more out of 9 symptoms observed of hyperactivity -impulsivity have shown persistence for at least 6 months to a degree of maladaptive and inconsistency with developmental level.

Few observations listed were:

- The symptoms of hyperactivity-impulsive or inattentive were present before the age of 7 that caused impairment.
- Some impairment from the symptoms observed are present in two or more settings defined.
- In social, academic, or occupational functioning, there must be clear evidence of clinically significant impairment
- During the course of a pervasive development disorder, schizophrenia, or other psychotic disorder, and are not better accounted for by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, the symptoms do not occur exclusively as such.

Criteria for Hyperactivity/Impulsivity

When it comes to hyperactivity-impulsivity six or more out of 9 symptoms have persisted to a degree of maladaptive and inconsistency for at least 6 months with developmental level.

Observations in Hyperactivity:

- One often squirms in seat or fidgets with hands or feet.
- Child often gets up from seat when he/she is expected to remain seated.
- A child often runs about or climbs when and where it is not appropriate or is not even asked for it (usually children in adolescence or adults may feel very restless in this).
- One often faces trouble playing or enjoying leisure activities quietly or on their own.
- Is often "on the go" or often acts as if "driven by a motor" or some external force which compels the behavior defined.
- Child often talks excessively where it is not required or is inappropriate.

Impulsivity:

- Child often speak out answers before the questions have been finished or rather completed.
- Often has trouble waiting for one's turn and remains restless.
- One often tends to interrupt or intrude on others activities (e.g., jumps into conversations or games).

Criteria for Inattention

Out of 9 symptoms 6 or more of inattention should have persisted for at least 6 months with developmental level to a degree of maladaptive and inconsistency.

1. It is often observed that in this one does not give close attention to details or makes careless mistakes in schoolwork, out of class work, or other activities.
2. Often one faces trouble keeping attention on tasks or play activities assigned.
3. One often does not seem to listen when spoken to directly or asked something.
4. Child often does not follow instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions).
5. One often faces trouble in organizing activities.
6. Child with this symptom often avoids, dislikes, or doesn't want to do things that take a lot of mental effort such as schoolwork or homework.
7. One facing this problem often loses things needed for tasks and activities for example their toys, school assignments, pencils, books, or related tools etc.
8. It is observed that student is easily distracted.
9. Child is often forgetful in daily activities.

When is hyperactivity, distractibility, poor concentration, or impulsivity considered significant?

When it begins to affect:

1. Performance in school.
2. Social relationships with other children and others the child come in contact.
3. Behavior at home.

It is then that ADHD may necessitate interventions.

When are you sure you are dealing with a significant ADHD?

- The behaviours must appear early in childhood, before the age of seven, and last for at least six months.
- The behaviours must cause a substantial handicap in at least two areas of a person's life, such as the classroom, the playground, at home, in the community, or in social settings.
    - Are they a recurring issue rather than a reaction to a one-time event?
    - Measured against a set of disorder-specific criteria and characteristics.

What are the signs and symptoms of ADHD-like behaviour?

- A significant change in the child's life, such as the death of a parent or grandparent, the divorce of parents, or the loss of a parent's job.
- Seizures that go undetected, such as petit mal or temporal lobe seizures
- A middle ear infection that causes hearing loss on and off.
- Medical conditions that may impair brain function
- Learning disability-related underachievement
- Depression or anxiety

Any pediatrician must consider the above conditions defined, when confronted with a child diagnosed as 'ADHD'.

B. ANXIETY DISORDERS

The second most common co- morbid condition seen in children with Specific Learning Disability is anxiety disorders.

Children and adolescents with anxiety disorders typically experience intense fear, worry, or uneasiness that can last for long periods of time and significantly affect their lives. If not treated early, anxiety disorders can lead to:

- Repeated school absences or an inability to finish school;
- Impaired relations with peers;
- Low self-esteem;
- Alcohol or other drug use;
- Problems adjusting to work situations; and
- Anxiety disorder in adulthood.

Anxiety disorder is manifested by

- Separation difficulties
- School refusal
- Phobias and fears interfering with function
- Panic episodes
- Social avoidance
- Tics
- Eating and sleeping difficulties
- Obsessive compulsive traits

Many different anxiety disorders affect children and adolescents. Several disorders and their signs are described below.

Generalized Anxiety Disorder: Children and adolescents who have SLD with generalized anxiety disorder engage in extreme, unrealistic worry about everyday life activities. They worry unduly about their academic performance, sporting activities, or even about being on time. Typically, these young people are very self-conscious, feel tense, and have a strong need for reassurance. They may complain about stomachaches or other discomforts that do not appear to have any physical cause.

Separation Anxiety Disorder: Children with SLD and separation anxiety disorder often have difficulty leaving their parents to attend school or camp, stay at a friend's house, or be alone. Often, they "cling" to parents and have trouble falling asleep. Separation anxiety disorder may be accompanied by depression, sadness, withdrawal, or fear that a family member might die.

Phobias: Some children and adolescents with SLD develop various phobias. These children have unrealistic and excessive fears of certain situations or objects. The main phobias encountered are school phobia, examination phobia, and phobias of situations like orals, sitting in enclosed spaces, etc. Children and adolescents with social phobias are terrified of being criticized or judged harshly by others. Young people with phobias will try to avoid the objects and situations they fear, so the disorder can greatly restrict their ability to perform.

Panic Disorder: Repeated "panic attacks" in children and adolescents without an apparent cause are signs of a panic disorder or even at the thought of a feared situation like an exam. Panic attacks are periods of intense fear accompanied by a pounding heartbeat, sweating, dizziness, nausea, or a feeling of imminent death. The experience is so scary that young people live in dread of another attack. Children and adolescents with the disorder may go to great lengths to avoid situations that may bring on a panic attack. They also may not want to go to school, be separated from their parents, face examinations, read the pages of the book which might be asked in the ensuing exams, etc.

Post-traumatic Stress Disorder: Children and adolescents can develop post-traumatic stress disorder after they experience a very stressful event. Such events may include experiencing physical or sexual abuse; being a victim of or witnessing violence; or living through a disaster, such as an earthquake or a tsunami. Young people with post-traumatic stress disorder experience the event over and over through strong memories, flashbacks, or other kinds of troublesome thoughts. As a result, they may try to avoid anything associated with the trauma. They also may overreact when startled or have difficulty sleeping and learning

Obsessive Compulsive Disorder: Some children and adolescents with SLD have obsessive-compulsive disorder, sometimes called OCD. Obsessions are unwanted, repetitive, intrusive thoughts, while compulsions involve repetitive stereotyped behavior the child or adolescents feel compelled to perform. The disorder involves either obsessions or compulsions, or a combination of the two. They intrude into everyday life and activities and cause feelings of distress.

Obsessive thoughts observed in these children include:

- Fear of contamination-worry constantly about having dirty hands or clothing, or about catching or spreading germs
- Fears related to accidents or acts of violence-worry constantly that the front door is not locked; crossing road will result in accident, etc.
- Fears that center on disorder or asymmetry-need to have order and precision, and may feel very anxious if even the smallest detail of his or her world is out of place, etc.
- Fear of committing an act of violence or sexual misconduct-fear of losing control and doing harm to others, or committing some type of harmful or embarrassing sexual act.

Compulsive rituals that are often observed in these children include

- Repeatedly washing one's hands or bathing
- Refusing to shake hands or touch doorknobs
- Repeatedly checking locks or whether books have been packed in accordance with the days time table

- Compulsively counting telephone poles
- Arranging socks or items of clothing
- Eating items of food in a specific order
- Compulsively repeating a specific word or prayer

OCD diagnostic criteria (Obsessive Compulsive Disorder)

Obsessions or compulsions, respectively: (1), (2), (3), and (4) define obsessions as follows:
(1) Recurrent and persistent thoughts, urges, or visions that are perceived as invasive and inappropriate at some point throughout the disturbance and produce significant concern or discomfort.
(2) The ideas, impulses, or pictures aren't just excessive worry about everyday issues.
(3) The person tries to ignore or suppress such ideas, urges, or pictures, or to neutralize them by thinking or acting in a different way.
(4) The person understands that his or her obsessive ideas, impulses, or pictures are the result of his or her own mind (not imposed from without as in thought insertion)
(1) and (2) define compulsions as follows:
(1) Repetitive activities (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, quietly repeating phrases) that a person feels compelled to undertake in response to an obsession, or in accordance with strict restrictions.
2) The behaviours or mental acts are intended to prevent or reduce suffering or to avoid some dreaded event or situation; yet, these behaviours or mental acts are either not realistically connected to what they are intended to neutralize or prevent, or they are manifestly excessive.
A. The person has realised that the obsessions or compulsions are excessive or unreasonable at some point during the disorder's course. It should be noted that this does not apply to youngsters.
B. Obsessions or compulsions generate significant distress and are time-consuming.

Obsessions or compulsions consume a lot of time and cause significant disruption in daily routines, academic performance, and social interactions. The usual onset of obsessive-compulsive symptoms in boys was pre-pubertal (mean age nine), while the average onset in girls was around puberty (mean age eleven).

Girls are more likely than males to suffer from anxiety problems. A second anxiety illness or another mental or behavioural disorder, such as depression, affects almost half of children and adolescents with anxiety disorders.

C. Conduct disorders and ODD

Oppositional defiant disorder is more likely to present in younger children. And this progress to conduct disorder in older children and adolescents. Both imply antisocial behavior in wide context.
However, care must be taken not to confuse this condition with normal variation associated with developmental stages especially in toddlers and early adolescence.

Oppositional defiant behavior: Criteria specifies that, to make a diagnosis of oppositional defiant behaviour, over a period of 6 months, a child's behaviour should involve at least four of the following

1. Often losing his or her temper
2. Often arguing with adults
3. Often defying adults' requests or rules
4. Often deliberately annoying other people
5. Often blaming others for his or her own mistakes
6. Often being touchy or easily annoyed by others
7. Often being angry and resentful and
8. Often being spiteful or vindictive

Conduct Disorder: Criteria specify that, conduct disorder is diagnosed if, over a period of 12 months, a child's behavior involves at least 3 of the following, with at least one occurring within the past 6 months.

- Aggression to people and/or animals
- Destruction of property
- Deceitfulness or theft
- Serious violations of rules

The disturbance in behavior should be severe enough to cause clinically significant impairment in social, academic or occupational functioning.

Non-complaint children definitely present a practical problem for parents and teachers. Early age of onset is related to more serious and persistent anti social behavior and more likely to exhibit attention deficit hyperactivity disorder, learning disabilities and academic difficulties.

D. Tourette Syndrome

Tourette syndrome is a neurological disorder characterized by tics- involuntarily rapid, sudden movement or vocalization that occurs repeatedly.

Diagnostic criteria include

- Both multiple motor and one or more vocal tics present at some time, although not necessarily simultaneously
- The occurrence of tics many times a day (usually in bouts) nearly every day or intermittently throughout the span of more than one year
- Periodic changes in the number, frequency, type and location of the tics, and in the waxing and waning of their severity. Symptoms can sometimes disappear for weeks or months at a time
- Onset before the age of 18 Years

Although the word "involuntary" is used to describe the nature of the tics, this is not entirely accurate. It would not be true to say that children have absolutely no control over their tics, as though it was some type

of spasm; rather, a more appropriate term would be "compelling." These children feel an irresistible urge to perform their tics, much like the need to scratch a mosquito bite. Some children with TS are able to hold back their tics for up to hours at a time, but this only leads to a stronger outburst of tics once they are finally allowed to be expressed.

Simple tics are repetitive involuntary movements of a particular part of the body or it may be vocal in nature with no meaning whereas complex tics which make use of more than one muscle group appear to be meaningful. The peak age group is 5-7 years.

The ratio of male to female is about 3:1. Among motor tics, facial tics are the commonest (76.5%) followed by neck tics (66.8%), eye tics (64.3%), leg tics (58.3%), arm tics (57.3%) and coprolalia (71.8%).

These children are at high risk of developing serious personality, social, physical and learning problems.

Developmental coordination disorder

Developmental Coordination Disorders (DCD) also known as developmental dyspraxia, are characterized as being "clumsy" or "awkward". Children with developmental coordination disorder have difficulties with motor coordination as compared to other children of the same age. These children have difficulties in mastering gross motor coordination tasks such as crawling, walking, jumping, standing on one foot, catching a ball and fine coordination task such as tying shoelaces. Some children also demonstrate expressive speech problems.

A significant impairment in the development of motor coordination is a key hallmark of Developmental Coordination Disorder.

- Given the person's chronological age and tested intelligence, performance in daily activities that require motor coordination is far below what is expected.
- The disturbance significantly interferes with academic achievement or activities of daily living and is not due to a general medical condition (e.g., cerebral palsy, hemiplegia, or muscular dystrophy).
- The disturbance is not due to a general medical condition (e.g., cerebral palsy, hemiplegia, or muscular dystrophy) and does not meet criteria for a Pervasive Developmental Disorder.

F. Depression

The experience and expression of depression in children changes according to the child's stage of development.

The symptoms of depression

1. Excessive fearfulness

2. Mood change
3. Loss of pleasure in activities
4. Social withdrawal
5. Decline in school grade
6. Self blame
7. Self harm and
8. Suicidal talk or thoughts.

1) Criteria for Major Depressive Episode

A. Five (or more) of the following symptoms have been present during the same 2-weeek period and represent a change from various functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.
   (1) Depressed mood most of the day, nearly every day. Note: In children and adolescents, can be irritable mood.
   (2) Markedly diminished interest pleasure in all, activities most of the day, nearly every day.
   (3) Significant weight loss when not dieting of weight gain or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.
   (4) Insomnia or hyperinosemia nearly every day.
   (5) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
   (6) Fatigue or loss of energy nearly every day.
   (7) Feelings of worthlessness or excessive or inappropriate guilt nearly every day (not merely self - reproach or guilt about being sick).
   (8) Diminished ability to think or concentrate, or indecisiveness, nearly every day.
   (9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicidal attempt or a specific plan for committing suicide.

In young children, feelings of sadness are often unaccompanied by depressive ideation. Very young children do not appear to sustain dysphonic moods.

5-8 years old with depression may have long episodes of sadness, withdrawal, and general inhibition which amount to immature forms of depression. These children have usually faced chronic and severe environmental frustrations like illnesses that limit gratification through normal activities, a punitive environment, or a severe loss for which there has not been adequate compensation. They feel sad without being able to verbalize a reason for this feeling and they accept the situation at face value without trying to reason things out. They often give important clues about the precipitating situation through doll play or drawings.

By puberty, the child incrementally stops reacting directly to the events around him and begins to react, rather, to his judgments about these events. Beyond 9 yrs age they form value-laden and moralistic opinions

as to his own worth and his behavior. Negative self-esteem, shame, blaming of self, disappointment with self and feeling of hopelessness are seen which were absent in younger children. Clinical picture in the older child is similar in many ways to that seen in the adult with one essential difference and that is the ability to moderate the eventual consequences of a present-day failure or frustration. Therefore, at this age a social rebuff means eternal alienation from others, while one poor grade means certain academic failure. This future orientation without the moderation gained from experience gives adolescent depressions a particular sense of urgency and panic, often culminating in self-destructive acts.

Depressed children showed a cognitive asymmetry characterized by poorer non-verbal than verbal recall and a deficit in the ability to process spatial information.

Conclusion: It is extremely important for clinicians to identify co-morbid conditions that occur often with specific learning disability in children and adolescence. This will help in developing and delivering program services and support to person with SLD.

Abbreviations:

AD: Anxiety Disorder
ADD: Attention Deficit Disorder
ADHD: Attention Deficit Hyperactivity Disorder
CD: Conduct Disorder
CP: Cerebral Palsy
D: Depression
DCD: Developmental Coordination Disorder
DD: Dissociative Disorder
GAD: Generalized Anxiety Disorder
MCD: Motor Co-ordination Disorder
MD: Muscular Dystrophy
OCD: Obsessive Compulsive Disorder
ODD: Oppositional Defiant Disorder
PD: Panic Disorder
PDD: Pervasive Developmental Disorder
PSD: Post-traumatic Stress Disorder
SAD: Separation Anxiety Disorder
SLD: Specific Learning Disability
TS: Tourette syndrome

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