

BLOCK -II : DISORDERS OF CHILDHOOD

UNIT 5: COMMON CHILDHOOD DISORDERS*

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5.1 LEARNING OBJECTIVES

After studying this Unit, you would be able to:

- *Explain the clinical picture, prevalence, comorbidity, progression, etiology, and treatment of Childhood Depression, Suicide, Oppositional Defiant Disorder and Conduct Disorder.*

5.2 INTRODUCTION

Childhood is often seen as the most carefree and blissful period of one's life. However, it is a matter of great concern that as many as one quarter of children worldwide have a diagnosable mental health condition at any given year that causes significant impairment (Dalsgaard et al., 2020). Evidence suggests that half of all mental health conditions begin well before the age of 14 years, affecting more than 10-20% of children and adolescents globally (World Health Organisation, [WHO], 2020) and 6-15% (approximately

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50 million) children in India (Hossain & Purohit, 2019; United Nations Children's Fund [UNICEF], 2021).

Mental health disorders in children are generally defined as delays or disruptions in developing age-appropriate thinking, behaviours, social skills or regulation of emotions. These encompass neuro-developmental, emotional, and behavioural disorders that impact individuals during their formative years with adverse psychological and social effects, and potential life long consequences; and include a large number of discrete health conditions, most common being anxiety disorders, depression, attention deficit hyperactivity disorder (ADHD), autism, and intellectual disability (WHO, 2020).

As in any age group, mental illness in children cannot be attributed to any singular cause and diagnosis usually involves the combination of comprehensive psychological, developmental and medical assessments. However, mental illnesses in this particular age group are hard to identify as symptoms are often misunderstood and seen as changes associated with the growing years. Further, these symptoms may vary depending on child's age and children may not be able to vocalise or explain how they feel or why they behave in a certain way. Another barrier to the process is the stigma associated with mental disorders in childhood, especially by parents, resulting in reluctance to seek professional help.

It is important to note that consequences of childhood disorders are wide, including their impact during childhood and the persistence of mental ill health into adult life. While most adulthood mental health problems emerge in early childhood and adolescence (Caspi et al., 2020); during childhood the impact is broad, ranging from personal distress of the child to the negative influence on their families and peers. These children are more likely to experience a compromised developmental trajectory, lower academic achievement, aggression towards other children, lowered self-esteem, and a sense of social rejection and isolation. Not only are these problems troubling to the child, they disrupt his/her ability to function well at home, in school or in other social situations. In some cases, these disorders may run a chronic course, are highly disabling, and are associated with significant premature mortality (Caspi et al., 2020).

Further, beyond their health consequences, the impact of these disorders on the social and economic well-being of individuals, families, and societies is enormous. Children with mental disorders are at higher risk of mental and physical health problems in adulthood, as well as increased likelihood of unemployment, involvement with criminal activities and subsequent contact with law enforcement agencies, increased need for medical and disability services, and fewer stable placements in society at large.

Childhood mental and developmental disorders are an emerging challenge to health care systems globally. While the burden of childhood disorders is large, growing, and underestimated, many of these disorders can be prevented and/or treated effectively. Thus, it is imperative to understand and recognise the warning signs of mental illness in children, and associated pharmacological, educational or occupational interventions, as well as specific forms of psychotherapy. Given these key concerns, the present Unit

and subsequent two Units focus on mental health disorders in childhood, and associated understanding of signs and symptoms, their frequencies, causes and risk factors, and most effective treatments.

5.3 CHILDHOOD DEPRESSION

Aman, a 9 year old boy was referred to speech therapist for stuttering. However, it turned out that he had serious emotional problems and was immediately referred to a psychologist. Multiple interviews with the psychologist revealed that he was often moody and sad without any reason. At times, he became highly irritable, aggressive and even socially withdrawn. He had lost his interest in school, his academic performance had deteriorated, and he had also lost 4 to 5 kgs of weight in the last two months. According to the mother, Aman was doing well till the age of 7 years. It was during this time that his parents decided to separate and filed for divorce. There were constant fights in the household, in response to which, he often started crying. Slowly he became more reclusive and stopped talking to both his parents, especially father. Currently, along with the aforementioned symptoms, he is exhibiting behavioural problems in school. He is not able to control his strong emotions. He is often angry and resentful. He even told his best friend about his plans to run away from his home or committing suicide.

Depressive tendencies in children and adolescents is not debatable anymore, it is a fact. Just like adults, a child can experience various degrees of depression and can be rendered just as disabled and dysfunctional (Kovacs & Gatsonis, 1994), and is prone to high risk of suicide (the second most common cause of death in those aged between 15 and 29 years) (WHO, 2020).

Prevalence and Progression

Global studies on child populations estimate the prevalence of mood related symptoms between 2-25% (Bernaras et al., 2019; McCabe et al., 2011; Vinaccia et al., 2006) with 2.8% of children under the age of 13 (Avenevoli et al., 2015) and 8-9% adolescents between the age of 13 to 17 years having a formal diagnosis of a depressive disorder (Costello et al., 2006). In children depressive symptoms occur at approximately the same rate in girls and boys, but in adolescents the female to male ratio increases to 2:1 (Birmaher et al., 1996).

Within the Indian subcontinent, National Mental Health Survey of 2015-2016 reported prevalence of mental morbidity to be 7% among children and adolescents, with depressive disorders being most common at a rate of 1.6% in 4 to 11 year olds and 2.6% in 12-17 year olds (Grover et al., 2019; Murthy, 2017). Also a growing trend has been observed in the prevalence of depressive disorders from 2% in 1980-89 to 6.6% during the decade of 1990–1999, to 13.49% from 2000 to 2006 (Malhotra et al., 2009).

Given the urban stressors of pollution, overcrowding, fast driven lifestyles and nuclear structures of families, the depression is more pronounced in urban youth (14.6%) as compared to rural youth (9.6%) (Ajaero et al., 2018; Mishra et al., 2018).

Findings also report co-morbid anxiety disorders (57.65%), attention deficit hyperactivity disorder (20%), conduct disorder (9%), and obsessive-compulsive disorder (7%) (Krishnakumar & Geeta, 2006).

Although children with depression recover to a significant degree, research suggests a high probability of experience of a subsequent depressive episode (Copeland et al., 2021) and long-term negative sequelae lasting into adulthood, including suicidality, co-occurring mental, substance, and physical health disorders, decreased social and academic functioning, and relationship problems (Center for Behavioural Health Statistics and Quality [CBHSQ], 2016).

5.3.1 Clinical Picture

For a diagnosis of childhood depression, the same criteria is to be used as specified for adults in International Classification of Diseases-10 (ICD-10) (WHO, 1993) - For depressive episodes of all three grades of severity (mild, moderate, and severe), a duration of at least 2 weeks is usually required for diagnosis, but shorter periods may be used if symptoms are unusually severe and of rapid onset. The key symptoms of depression (F32) and all its variations include depressed mood, loss of interest and enjoyment, reduced energy, increased fatiguability (even after slight effort) and diminished activity (ICD-10).

The lowered mood usually does not change and mostly remains stable. There are individual variations, and atypical clinical presentations among the adolescents. One modification used for diagnosing depression in children is that irritability is a major symptom and is often substituted for depressed mood. Childhood depression also includes specific behaviours and somatic symptoms, e.g., loss of interest or pleasure in normally enjoyed activities, lack of emotional reactivity to normally pleasurable events and situations, withdrawal, crying, avoiding eye contact, physical complaints of pain, poor appetite, weight loss (often defined as 5% or more of body weight in the past month) along with marked agitation and aggressive behaviour, and in some cases suicide (ICD-10).

Criteria for Childhood Depression

According to Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (**DSM-5**), depressive disorders all have one common feature, namely the presence of sad, empty or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function.

A new feature in DSM 5 includes the *Disruptive mood dysregulation disorder* (which should not be diagnosed before the age of 6 or after the age of 18). This disorder is characterised by severe recurrent temper outbursts manifested verbally (e.g., verbal rages) and/or behaviourally (e.g., physical aggression toward people or property). These outbursts often occur as the result of frustration and in order to be considered a diagnostic criterion must be inconsistent with the individual's developmental level, occur three or more times per week for at least a year in a number of different settings (at home, at school, etc.) and be severe in at least one of these. The prevalence of this disorder has been estimated at between 2 to

5%, with male children and teenage boys being more likely to suffer from it than their female counterparts.

Source: *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5).*
American Psychiatric Association.

Key Areas and Associated Symptoms of Depression in Children and Adolescents

Physical

- Repeated complaints of not feeling well and physical symptoms like headache, stomachache, fatigue, dizziness, nausea, or upset stomach (with little or no medical reason).

Social

- Difficulty with relationships.
- Hostility towards others or always blaming others.
- Loss of interest in social contact.
- Prefers being alone.
- Withdrawal from playing with friends.

Emotional and Behavioural

- Sad or low mood most of the time.
- Increased irritability, anger outbursts, and temper tantrums.
- Self-deprecating statements like '*I am good for nothing*', '*I am ugly*', or '*No one likes me*'.
- Feelings of guilty and self-blame.
- Fearful and worried most of the time.
- Increased sensitivity and vulnerability to criticism.
- Reckless and impulsive behaviour, heightened risk taking, substance or alcohol abuse.
- Frequently complains of boredom.
- Uninitiated crying spells.
- Talks of or runs away from home.
- Talks about death or taking his/her life.
- Easily tired.
- Loss of interests in previously enjoyed activities.
- Trouble sleeping.
- Problems in concentrating, remembering things, or making simple decisions.

School

- Increased absenteeism.
- Poor academic performance.

- Lack of participation in school activities.
- Problems fitting in at school or peer group.

Source: National Institute of Mental Health (NIMH, America), 2020a.

5.3.2 Etiology/ Causal Factors

Depression at any age has a highly complex etiology of biological, psychological, socio-cultural, and economic factors which contribute to its origin, development, and persistence.

- **Biological**

Genetic

Studies on childhood depression support the idea of heritability of depression and mood problems. For instance, there is a 40% increased risk of depression and 7.8% increased risk of suicide attempts in children with clinically diagnosed parents, especially mother (Scourfield et al., 2003). It can be attributed to genetic predisposition to a hyperactive hypothalamic–pituitary–adrenal (HPA) axis (moderate hyperphenylalaninemia) (Dean & Keshavan, 2017) or genetic anomalies in serotonergic transmission, i.e., a reduction in serotonin expression, which in turn is linked to greater vulnerability to depression (Caspi et al., 2010).

Structural

Structural anomalies associated with childhood depression include reduction in neuron density and size (Bernaras et al., 2019), and smaller hippocampus, amygdala, and frontal lobes, especially the left side (Whittle et al., 2014).

Neuro-chemical

Serotonin is a neurotransmitter linked to important life functions like regulation of appetite, sleep, temperature, memory, learning, and social behaviours, and is reportedly found in less than required quantities in children with depression (Nique et al., 2014) along with reduction in other neurotransmitters like norepinephrine and dopamine (Bernaras et al., 2019).

Neuro-functional

Like in adults, depression in children has also been linked to increased inflammation and hyperactivity of the HPA axis, increased activity in amygdala, reduced neuroplasticity, and network dysfunction (Dean & Keshavan, 2017).

Endocrine

Studies suggest that depression may be linked to endocrine/hormonal alterations: high cortisol levels (Herane-Vives et al., 2018) and decreased growth hormone production (Dahl et al., 2000).

Neurological Disorders

Early onset seizures or epileptic syndromes, chronic recurrent cephalalgias, several neuro-metabolic diseases, and intracranial tumours are also implicated (Narbona, 2014).

Sleep Disorders

Sleep has many restorative functions on the nervous system and disturbances in sleep tend to affect the hippocampus, neurotoxic elevation, and a net decrease in gray matter in the left orbito-frontal cortex (Novati et al., 2012). A reciprocal association exists between sleep and depression. Sleep disturbance leads to depression and depression often escalates sleep problems (Franzen & Buysse, 2008). Particularly in young children and adolescents, depression has been associated with both trouble falling asleep (onset insomnia) and maintaining longer sleep duration (maintenance insomnia) (Accardo et al., 2012) leading to poor academic performance, poor emotional regulation, risk-taking behaviours, and social and emotional adjustment problems (Foley & Weinraub, 2017).

Pre-natal Factors

Prenatal exposure to stress, under nutrition, and alcohol abuse by mother leads to intense or persistent sensitisation of the central nervous system, hyper reactivity and alteration of the neurotransmitter system leaving children vulnerable to later depression.

- **Psycho-social**

Within this category, a host of psychological and social theoretical perspectives have been provided to explain childhood depression.

Attachment Theories

Attachment refers to the innate propensity of human beings to establish strong and long-lasting affective ties with other people (Bowlby, 1976). Consistency, nurturance, protectiveness, and responsiveness in early interactions with caregivers, especially mother, contribute to the development of healthy relationships with others and the world at large, whereas failure on the part of the caregiver to satisfy the child's need for security, care and comfort may be associated with negative self-concept and sensitivity to loss (Chorot et al., 2017; Cummings & Cicchetti, 1990), and often leads to insecure attachment styles in children where the child anxiously avoids or anxiously resists the caregiver (Ainsworth et al., 1978), and engages in more disorganised, disruptive, aggressive, and dissociative behaviours (Main, 1996). According to Blatt (2004), these deficiencies in early life experiences increase the risk of depression in a child through two pathways, i.e, feelings of loneliness and abandonment (anaclitic depression), and feelings of failure and worthlessness (introjective depression).

Empirical research has supported the claims of these theorists. For instance, it has been found that even at the age of 3 weeks, babies display various interactive behaviours while interacting with the mothers. These behaviours were absent in more disturbed interactions, which may trigger infant anxiety and later depression. This is specifically true in case of depressogenic mothers who have difficulty responding appropriately to their infant's attachment needs, giving rise to disorganised attachment and thus pass on the depressive mood (Beeghly et al., 2017; Bigelow et al., 2018).

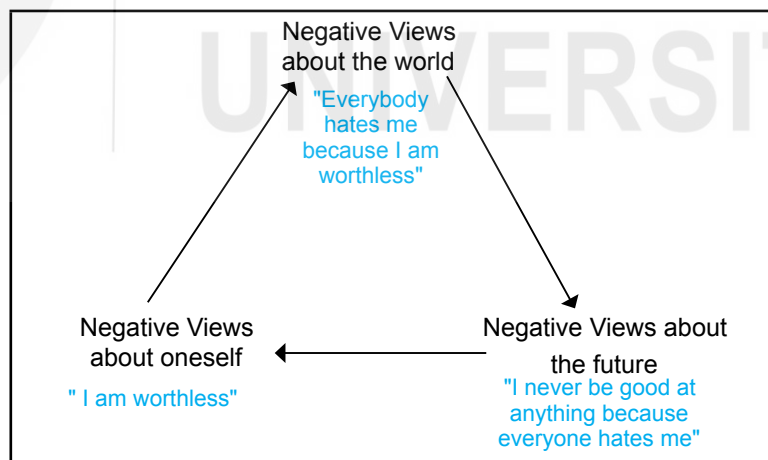
Further, later life attachments like peer attachment reduce depression levels in at-risk children, and also highlight the curative aspect of attachment between adolescent peers (Ju & Lee, 2018).

Within this paradigm, depression is conceptualised as a learned phenomenon in which child acquires and maintains depressive tendencies either thorough observation and imitation of a depressive model, primarily parent(s) (Bandura, 1977), or due to reinforcement of behaviours like crying, complaints or expressions of guilt (Lewinsohn, 1975; Skinner, 1953), an excess of avoidance behaviours and the lack of positive reinforcement through maternal rejection or low parental support, or the loss of efficiency of positive reinforcements (Costello, 1972).

Cognitive Models

Another important line of research that explains childhood depression is the cognitive behavioural perspective (Bernaras et al., 2019). This includes the concepts of Learned Helplessness (Seligman, 1974) and associated Attributional Reformulation (Abramson et al., 2000), and Beck's (1967) Information Processing Cognitive Theory.

Learned helplessness is the state when a child, due to early failures or inability to produce desired outcomes despite efforts, learns to belief that he or she has no control over aversive events and hence becomes passive and unmotivated to try to produce any effect on environment (Seligman, 1974). Further, in the wake of uncontrollable aversive events, a person tries to make sense of the world by deciding about the cause of the event (attribution), and in this situation a depressed child produces a pessimistic or depressogenic attribution for a negative event as internal (blames self), stable (beliefs that the outcome is permanent) and global (same for all situations). For example, in case of an altercation with a friend, the child will conclude that *'It happened because I am flawed and nobody wants a friend like me'* (Gladstone & Kaslow, 1995).



One of the most significant theories on depression (Beck, 1967) postulates that depression is caused by particular stressors that activate a schema that screens and codes the depressed individual's experience in a negative fashion (Ingram, 1984). A schema is a cognitive belief that are acquired early in life and act as a filtering mechanism that helps us make sense of an experience. Depression is marked by depressogenic schemas which are rigid, extreme and counterproductive (e.g., *'If I don't do well in everything, I am a worthless person'*) and are activated by a stressful event. These dysfunctional schemas fuel our current thinking expressed in three areas,

which Beck calls the “cognitive triad”: negative views about oneself, the world and the future (Beck & Alford, 2009; Beck et al., 1983).

This cognitive triad is maintained by errors in thinking (biased processing of negative self-relevant information) known as cognitive distortions and include tendency to think in extremes (all-or-none thinking), tendency to focus on one small negative detail within a situation while ignoring other elements (selective abstraction), tendency to generalise a single negative consequence to multiple situations (over-generalisation), and indulgence in self-blame (centralisation) amongst others.

Self-Control Theory

This theory proposes deficits in the self-control process as responsible for depression. It consists of three phases: self-monitoring (attending only to negative events and recognise only immediate, short-term consequences), self-evaluation (negative and unrealistic), and self-administration of consequences (little self-reinforcement and more self-punishment) (Rehm, 1977; Rehm et al., 1979). Depressed children internalise dysfunctional external control guidelines and develop a depressive attributional style (Bandura, 1977; Rehm, 1977).

Interpersonal Theory

Closely linked to attachment perspective, this theory proposes that reasons of a child’s depression lie in their interpersonal functioning like unresolved grief, interpersonal disputes, transition roles, interpersonal deficits (Markowitz & Weissman, 1995) and problems in peer relations (Bernaras et al., 2019).

- **Stressful Life Events**

Studies focusing on children and adolescents report modest associations between stressful life events and depression (Williamson et al., 1995). These stressful life events include loss of a loved one, parental divorce or separation, domestic violence, emotional, physical or sexual abuse, neglect, dropping out of school, financial difficulties in the family, losing friends, or the illness of a family member (Shapero et al., 2013).

However, the tendency to develop depression in response to a stressor depends on strength and frequency of stressors, temperamental traits of child like unstable emotional reactivity as well as protective factors like social skills, familial and peer support (Caspi et al., 2010).

- **Family**

Parental behaviour can be understood in terms of warmth and control. Warmth is linked to engagement and expression of affection, respect, and positive concern by parents or principal caregivers, and control refers to optimum discipline and channelising of child’s energies (Rohner & Khaleque, 2003). While there is a significant association between parental warmth and positive adjustment (Yap et al., 2014), low levels of perceived parental warmth and indiscriminatory control are linked to clinical and school maladjustment, as in neglectful and authoritarian parenting styles (Jaureguizar et al., 2018). Other aspect within family associated with depression is dysfunctional communication.

- Sociocultural Models

These models postulate that social and cultural variables are responsible for the appearance of depressive symptoms. These include:

- Low socio-economic status and associated conditions of poverty, deprivation, over-crowding, etc. (Reeves et al., 2014).
- Culturally sanctioned depressive ways of reacting to stressful events and internalising symptoms (Lorenzo-Blanco et al., 2012).
- Specifically, a source of depression in girls aged 7–10 years (Evans et al., 2013) has been reported to be internalisation of an culturally sanctioned and unrealistically thin ideal body.
- Relocation and acculturation.

5.3.3 Treatment

Predominant approach for treatment of depression in children has been the combined use of medication and psychotherapy.

- **Pharmacotherapy**

Medical treatment for depression in children and adolescents follows the pharmacological trends as in treatment for adult depression. Anti-depressants like Selective Serotonin Re-uptake Inhibitors (SSRIs) have been used successfully for sometime now, especially in case of increased risk of suicidal ideations in adolescents. However, their side effects like nausea, headaches, nervousness, insomnia, and even seizures have to be kept in mind.

- **Psychotherapy**
 - a) *Play therapy*

Younger children with depression lack the ability to fully process and articulate their inner states hence play activities are used to help them through mental and emotional issues. Some of the key techniques used are:

- Bubble play- Child blows and pops bubbles for stress release.
- Block play- A wall of blocks is built which the child breaks down for venting anger.
- Worry dolls- Child assigns a worry to a doll and leaves it behind in therapist's office.
- Colour your life- Child uses different colours to represent feelings.
- Emotion thermometer- An emotion thermometer is made showing a range of emotions from 0 (with a smiling face) to 10 (with a frowning face) and child is taught to monitor and regulate their emotions using it.
- Role playing- Involves family, where everyone plays their own and reverse roles for better understanding.
- Laughter play- Therapist and child take turns to make each other laugh without touching.
- Superhero Play- Child plays the role of their favourite superhero and solves problems.

One recent development in play therapy is *Parent-child Interaction Therapy* (Lenze et al., 2013). It involves encouraging the parent to use:

- *effective praising techniques, to play games the child wants to play, to get down to the child's level and be enthusiastic;*
- *effective discipline using a very specific 'time out' to help the child learn to obey parental commands; and*
- *to help their child regulate emotions more effectively.*

During therapy sessions, therapists observe parent-child interactions through a one-way mirror. They talk directly to the parents, who wear an earpiece and a microphone, allowing the therapists to coach and instruct them on how to deal with the child's emotions in real time.

b) Cognitive Behaviour therapy

Cognitive Behaviour therapy (CBT) is found to be a highly effective form of psychological treatment for adolescent depression. It focuses on identifying and challenging maladaptive schemas, automatic thoughts, and cognitive distortions that force an individual to negatively evaluate experiences and hence are depressogenic.

The therapeutic procedure comprises of three phases:

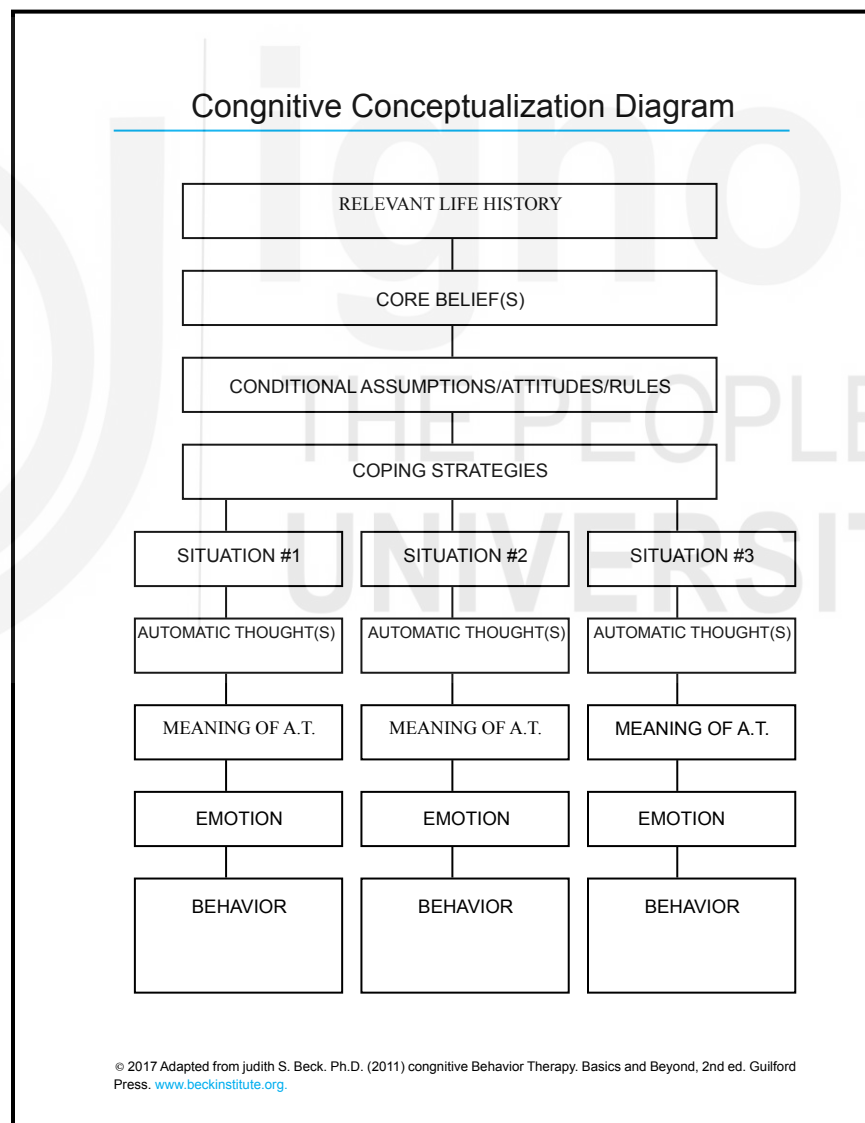
Initial Phase: Involves assessment of the problem and development of a collaborative relationship. Here, Case conceptualisation, Dysfunctional Thought Record (DTR) and Thought sampling are effective tools of assessment.

Dysfunctional Thought Record: DTR is used to record the thoughts, feelings and emotions of the client with regard to a particular stressful situation. It also allows the client to look into his reactions to the situation as well as alternatives that could have been adopted by him. Thought records are used to make a patient aware of their negative automatic thoughts (NATs), distinguish thoughts from facts, and see how they impact upon their mood. They encourage the consideration of alternative thoughts and the resulting change in emotion. Filling out a DTR involves detailing the situation, mood, the NAT, evidence for this NAT, evidence against this NAT, the development of an alternative rational response, and a rerating of mood.

Dysfunctional thought record					
Date/ time	Situation	Automatic thoughts	Emotions	Alternative response	Outcome
	1. What actual event of stream of thoughts, or daydream or recollection led to the unpleasant emotion? 2. What (if any) distressing physical sensations did you have	1. what thought(s) and/or image(s) went thorough your mind? 2. How much did you believe each one at the time?	1. What emotions (sad, anxious, angry etc) did you feel at the time? 2. How intense (0-100%) was the emotion?	1. What cognitive distortion did you make? 2. Use questions at bottom to compose a response to the automatic thought(s) 3. How much do you believe each response?	1. How much do you now believe each automatic thought? 2. what emotions(s) do you feel now? How intense (0-100%) is the emotion? 3. What will you do? (or did you do?)

Thought Sampling: Having a tone sound or any other sound at a random interval at home and then recording thoughts is one way to get a sample of cognitive patterns. Clients may record their thoughts in a tape recorder or notebook.

Case Conceptualisation: During case conceptualisation, the therapist looks into client's early childhood experiences that lead to basic beliefs (whether positive or negative) about oneself and one's world, and also act as filters of incoming information known as schemas. Whenever a critical negative event happens in the client's present, it leads to activation of these schemas or assumptions as well as negative automatic thoughts, which are spontaneous and occur without effort or choice. These NATs are responsible for the way we process information, feel and behave in a situation. Case conceptualisation is used to generate a comprehensive picture of client's thinking, feeling and behavioural patterns and the underlying causes for it; and helps the therapist to locate the areas to work upon during therapy.



A typical case conceptualisation diagram is as follows:

Middle Phase: As therapy progresses, a guided discovery approach is used to help clients learn about their inaccurate thinking, '*three question technique*' being the most common. Other important aspects of the therapeutic process

are methods to identify automatic thoughts and the assignment of homework, which is done throughout therapy.

A three question technique (Padesky, 1994) is used to help clients revise negative thinking by inquiring into their negative beliefs and bringing about more objective thinking.

1. What is the evidence for the belief?
2. How else can you interpret the situation?
3. If it is true, what are the implications?

For understanding, an excerpt from therapy session is given:

Therapist: So you feel that since you didn't score 90% marks, you are a failure. What is your evidence for this belief?

Mira: I don't have any evidence. I just feel that way.

Therapist: You 'just feel that way' How else could you look at the situation?

Mira: I scored better than many of my friends so I guess its not that bad.

Therapist.: If in fact you failed, what would the implications be?

Mira: My parents and friends would still love me. There are other things, I could try.

Termination Phase: As clients reach their goals, termination is planned, and clients work on how they will use what they have learned when therapy has stopped.

c) Psychoeducation

Parents and family are educated about the child's depression to generate better understanding, acceptance, and participation.

d) Family therapy

Family as a unit is involved in therapy with an aim to build a supportive emotional environment devoid of criticism, over involvement or dysfunctional communication, so that the child learns adaptive coping strategies and effective emotional expression.

e) Behavioural techniques

Depression often leads to loss of motivation and reduced participation in routine and pleasurable activities. One of the key focuses of behaviour therapy is to increase daily and weekly activity level which generates a sense of achievement, increases engagement with environment and uplifts mood. Two commonly used techniques involve:

● Weekly activity schedule:

	Weekly Activity Schedule						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Morning							
Afternoon							
Evening							

● **Behavioural Activation:**

You can begin to decrease depression by engaging in activities you find enjoyable, and by taking care of responsibilities that you have been neglecting

List three activities you enjoy:

- 1.
- 2.
- 3.

List three responsibilities you need to take care of:

- 1.
- 2.
- 3.

Try doing at least one activity or responsibility each day. Use the following scale to rate your depression, pleasant feelings, and sense of achievement before and after the activity.

0	1	2	3	4	5	6	7	8
None	Minimal	Slight	Mild	Moderate	A Lot	Higher	Very High	Extreme

Activity (location, date, time)		Depression	Pleasure	Achievement
	<i>Before</i>			
	<i>After</i>			
	<i>Before</i>			
	<i>After</i>			
	<i>Before</i>			
	<i>After</i>			

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Self Assessment Questions 1

1. What are the key symptoms of depression?
2. Explain the role of neuro-chemicals in childhood depression.
3. How does a pessimistic or depressogenic attribution for a negative event occur?
4. What are cognitive distortions?
5. Name the three phases proposed by the Self-control theory.
6. What is thought sampling?

5.4 SUICIDE IN CHILDREN

Every year more than 700, 000 people die by suicide worldwide, i.e., one person in every 40 seconds chooses to end his or her life, making suicide a leading cause of death (WHO, 2020). Shockingly, a much larger number of people actually make suicide attempts, for every death by suicide there

are 25 attempts (Goldsmith et al., 2002) and for every attempt at suicide, there are at least two to three people who seriously consider suicide (Nock et al., 2008). Suicide is a serious threat to global health care and is closely associated with mental health problems, especially, depression.

Suicide is an act of self-harm which leads to death. According to American Psychological Association, suicide is death caused by self-directed injurious behaviour with an intent to die as a result of the behaviour (APA, 2021). Before we go any further, let us understand some terms:

Suicidal Ideation- Thinking about suicide and wanting to take one's own life. It can be passive where one wishes to die but lacks the intent or plan to commit suicide, or it can take an active form where one not only thinks about it but also makes specific plans and has the intention to carry out suicide.

Suicide Attempt- A potential self-injurious act which does not lead to death but may result in serious injury.

Death by Suicide- An act of taking one's own life.

Regarding epidemiology of suicide, it has an estimated lifetime prevalence of 9% for the general world population and about 2% within a 12-month period (Nock et al., 2008). Worldwide, nearly 8 lakh suicide cases are registered every year. In populations aged between 10-24 years, it is the third leading cause of death. It is the fourth leading cause of death in 15-19 year olds and accounts for 20% of all annual deaths. While suicide attempts are more common in girls, boys (81% of those who attempt suicide) have a greater death by suicide rate with use of firearms, ingestion of pesticide, suffocation, and poisoning being the preferred modes of self-harm (APA, 2021).

Suicide is a global phenomenon but 77% of global suicides occur in low and middle income countries (WHO, 2020). In India itself, during 2008-2018, suicide rates were estimated at 3.4% in those aged less than 14 years and 35.6 % in those aged between 15-29 years, male suicide victims were nearly double as compared to female suicide victims (Swain et al., 2021). As per the National Crime Research Bureau (NCRB), the suicide rates in India grew at an 8% rate per year during the period 1997-2006, while the population of the country grew at 19% during that time. Specifically, with regard to student population, it has gone up from 5% in 1999–2008 to 7.4% in 2009–2018 with family problems (32.4%), failure in examination (2%), love affairs (4.5%) and illness (17.1%) being the leading causes of suicides (NCRB, 2019).

Stages of Suicide

While a number of suicides are seen as 'spur of the moment' impulsive acts, psychologists like Webb (2019) believe that there is a stage wise progression involved as follows:

- ***Stage 1 Falling short of Expectations***

The causal chain begins with events where one feels falling severely short

of standards set by self or others, leading to a sense of failure.

- *Stage 2 Attributions of Self*

These failures are attributed internally which results in self-blame, self-loathing, and a sense of being different and isolated.

- *Stage 3 High Self Awareness*

One becomes painfully self-centred and extra self-conscious which can impair one's ability to take somebody else's point of view or empathise. Often at this stage, social contact is reduced and the person finds it hard to imagine how their loved ones would feel without them alive. To recognise this stage, look for a detached style of writing that revolves around self and is devoid of others' perspective in social media posts or an assumed philosophy that no one understands you or know how you are feeling.

- *Stage 4 Negative Affect*

Negative emotions like anger, disgust, guilt, fear, and anxiety are generated which lead to psychological agony and one strives to escape them.

- *Stage 5 Cognitive Deconstruction*

At this stage, the person becomes completely absorbed in self and fails to process information properly. For instance, time is perceived at an altered pace and seems to slow down. A week may feel more like a month. Creative activities reduce, concrete thinking increases, and one becomes more detached about material stuff.

- *Stage 6 Disinhibition*

Irrationality and disinhibition often follow the deconstructed state. Meaningful thought is impaired, fear of death is reduced, physical pain tolerance increases, and drastic measures like suicide become highly acceptable.

5.4.1 Clinical Picture of Suicide

A warning sign (including worsening sign) is like a signal to alert you against impending suicide act. It does not mean that the person is definitely going to attempt suicide but must not be ignored, hence, should be taken seriously.

- Constant sad mood and feelings of despair (depression is a major risk factor for suicide).
- Mood swings (being emotionally high one day and deeply discouraged the other).
- Feeling entrapped or hopeless about future (talks about feeling hopeless, having no reason to live, being a burden to others, feeling trapped, or being in severe emotional pain).
- Sudden calmness (person suddenly becomes calm after a period of depression or extreme moodiness).
- Social Withdrawal (prefers to be alone and avoids family, friends and social activities).

- Diminished or Loss of Interest (loses interest in school, work, hobbies or previously enjoyed activities).
- Preference for online games or networks (spends hours alone playing online games or other internet activities).
- Changes in Neuro- vegetative Functioning (loss of appetite and/or a steep increase or decrease in sleep, altered bowel-bladder movement).
- Changes in behaviour, personality and appearance (attitude or behaviour changes like being unnecessarily gregarious, speaking or moving with unusual speed or slowness, disruptive normal routine, less concern about personal appearance, refusal to maintain personal hygiene).
- Increased risk behaviour (engages in potentially dangerous and self-harming behaviour like reckless driving, having unsafe sex or increased use of drugs and/or alcohol).
- Suicide ideation (pre-occupation with death and dying, talking about suicide, often searches online for ways to die).
- Making preparations (puts personal business in order, visits friends and family, saying goodbye to people as if for the last time, giving away personal possessions, posts cryptic messages on social media, getting the means to take own life such as buying or sourcing a rope or gun or stockpiling pills).

5.4.2 Etiology/ Causal Factors

Suicide is a complex act and cannot be attributed to a single causal factor. It is important to recognise the interaction of a host of factors that put a person at risk for suicidal behaviour. Some of these risk factors are:

1) *Biological factors*

- Family history of a mental disorder or substance use.
- Family history of suicide.
- Neuro-chemical imbalance including low levels of Serotonin and Gamma Amino Butyric Acid (GABA), and high levels of Cortico-Releasing Hormones (CRH).
- Depression, other mental disorders, or substance use disorder.
- Long-term pain or a disabling or terminal illness.

2) *Individual factors*

- History of suicide attempts.
- Disciplinary or legal problems.
- High risk behaviours like involvement in gangs, delinquency, etc.
- Confusion over sexual orientation.

3) *Psychological factors*

- Depressive thoughts.
- Feeling of hopelessness, helplessness, guilt, and worthlessness.

- Poor body image and low self-esteem.
- Learning through exposure, either directly or indirectly, to others' suicidal behaviour, especially of role model like a member of family or peer group or a celebrity.

4) *Socio-cultural factors*

- Exposure to family violence, including physical or sexual abuse and neglect.
- Exposure to bullying.
- Cultural and religious beliefs (e.g., belief that suicide is noble option to resolve a personal dilemma).
- Recent exposure to an increased number of local suicides or an increase in media coverage of deaths by suicide.
- Low socio-economic status, overcrowding, or violent neighbourhoods.
- Lack of social support or isolation.
- Being part of vulnerable groups who experience discrimination, such as refugees and migrants; indigenous people; lesbian, gay, bisexual, transgender, intersex (LGBTI) persons.

5) *Situational factors*

- Experiencing conflict, disaster, violence, abuse, or loss and a sense of isolation.
- Easy access to lethal self-harm methods, such as firearms or medications.
- Life crisis like parental divorce, loss of a loved one or separation.
- Examination stress.
- Poor academic performance.

(Based on sources from American Psychological Association (2020), and National Institute of Mental Health (2020b))

Theories of Suicide

Traditional Theories of Suicide

One of the earlier attempts to understand suicide was in terms of a response to overwhelming pain or psychache (Shneidman, 1985, 1993), social isolation (Durkheim (1951), an effort to escape an unpleasant state of mind (Baumeister, 1990) or as a product of depressive thoughts and hopelessness (Abramson et al., 2000; Beck, 1967).

Modern Theories of Suicide

Modern theorists emphasise the need to understand suicide not on the basis of a single factor but rather on a continuum—within an “ideation-to-action” framework.

For instance, *Joiner (2005)* in his Interpersonal Theory of Suicide proposed that perceptions of low belongingness and high burdensomeness combine to bring about desire for suicide, whereas high capability for suicide facilitates potentially lethal suicide attempts. Similarly, *O'Connor's*

(2011) Integrated Motivational-Volitional model suggests that defeat and entrapment are the primary drivers of suicidal ideation, and that acquired capability along with others factors (e.g., access to lethal means, planning, impulsivity) explain the propensity to act on suicidal thoughts.

More recently, *Klonsky and May (2015)* offer explanations for development of suicidal ideation and progression from suicidal ideation to attempts in a step wise process as:

Step 1: Development of suicidal Ideation due to interaction of pain and hopelessness.

Step 2: Strong vs. Moderate ideation which depends on level of connectedness one feels with other people, one's job, role, interests, or any personal goal or purpose that keeps one invested in living. If connectedness is there, then despite pain and hopelessness, suicidal ideation will remain moderate.

Step 3: Progression from Ideation to Attempts

Once an individual has developed a desire to end his or her life, whether the person will act on that desire and make an attempt will depend on his acquired capability which further depends on three factors: dispositional, acquired, and practical.

Dispositional refers to factors driven largely by genetics, such as pain sensitivity or blood phobia; *Acquired* refers to the habituation to experiences involving pain, injury, fear, and death leading to low sensitivity and higher capacity; and *Practical* refers to concrete factors that make a suicide attempt easier like knowledge of and access to lethal means, such as a firearms.

5.4.3 Intervention Measures for Suicide

Suicide is a serious public health problem; however, suicides are preventable with timely, evidence-based and often easily accessible low-cost interventions.

- **Psychopharmacology**

Medicines like anti-depressants, anti-psychotics and anti-anxiety have proven beneficial for reducing the risk of recurrent suicidal behaviour in patients with underlying depression or schizophrenia or associated schizoaffective disorders.

- **Crisis Intervention**

It aims at reducing the risk of imminent or recurrent suicidal behaviour through safety planning, watchful supervision by a caregiver, limiting access to lethal means such as firearms, pills, or poisons, and follow-up through a series of supportive phone calls or personalised visits by a trained mental health professional. There are many organizations that offer support for help in such crisis.

Activity

- Find out about voluntary organizations/agencies in your locality and at a national level that provide support for those contemplating suicide.

- Talk to them and/or find out the process and methodology they use for providing support and counseling to such people and their family.

- ***Detailed Psychotherapy***

Psychotherapies like Cognitive Behavioural Therapy (CBT) and Dialectical Behaviour Therapy (DBT) have proven helpful in suicidal cases. While CBT works on the underlying depressive thoughts and cognitive distortions, and training in adaptive coping skills; DBT has been shown to reduce suicidal behaviour in adolescents especially with borderline personality disorder, a mental health condition characterised by lack of emotional stability, poor self-image, impulsivity, volatility and relational problems. It aims to teach children and adolescents to live in the moment, develop healthy ways to cope with stress, regulate emotions, and improve their relationships with others.

- ***Family therapy and Psychoeducation***

It is an attempt to educate the loved ones about the condition of the patient and the warning signs; and involve them in therapeutic process by understanding the family dynamics, reducing the express emotions like criticism, over-involvement and by generating social support for patient.

- ***Associated Interventions***
- *Substance use disorder treatment*, in case of a preceding or increased alcohol or drug use.
- *Lifestyle changes* including maintaining daily routine, social involvement, nutritious diet, exercise, and abstinence from substance abuse.

5.5 OPPOSITIONAL DEFIANT DISORDER AND CONDUCT DISORDER

Case Study

Sandy brings her son Matt, 6 years of age, to the general practitioner. Sandy says that she cannot manage his behaviour at home and that the teacher has said that he will not follow instructions in the classroom and is bullying his friends at lunch time. The GP asks what the boy was like as a baby and toddler. He learns that Matt would cry easily and that it took Sandy a long time to settle him. As a toddler if Sandy tried to remove something he wanted, Matt would throw tantrums lasting for at least half an hour. As he got older, Matt would often kick his mother and refuse to do what she asked. Now he argues with her every day, even about small things. He fights daily with his 8 year old sister, Amy, and always blames her when things get damaged.

Matt's teacher considers that Matt is able to do his schoolwork but is stubborn and refuses to join in tasks with the other children. He gets out of his seat regularly and walks around the room. He will often flick the other children on the arms and take away their pencils. He has difficulty making friends as he always wants them to play his games and will yell at them if they do not do what he wants.

When the GP asks Matt about school and home, Matt tells him that he hasn't done anything wrong and that everyone picks on him and that he gets blamed for everything. It's Matt's view that everyone wants him to behave better and that they should just leave him alone.

Source: Fraser and Wray, 2008.

DSM 5 lists Oppositional Defiant Disorder (ODD) and Conduct Disorder under Disruptive, Impulse-Control and Conduct Disorders category. They include behaviours that significantly threaten or violate the rights of others and consequently may bring the individual into conflict with society or authority figure(s) (APA, 2013). For a diagnosis, these behaviours must show a recurrent and persistent pattern, and should be deviant from the usual age-appropriate behavioural outbursts, mood swings and rebellion associated with childhood and adolescence.

While ODD is characterised by hostile, defiant, or disobedient behaviour; CD involves serious violations of rights of others and antisocial behaviours such as lying and stealing which can result in criminal, educational, and familial consequences (APA, 2013; WHO, 1993). Since both conduct and opposition defiant disorders exhibit qualitative similarities in behavioural deviances and shared antecedent risk factors, they are invariably linked as a single category in prevalence and epidemiological studies (Boat & Wu, 2015). ICD-10 recognises ODD as a subtype of CD and DSM-5 puts them in the same category of disruptive, impulse-control and conduct disorders. However, researchers do recognise significant distinctions between the two in terms of time of onset, externalisation of disruptive behaviour, and degree of violation along with gender differences in prevalence (Boat & Wu, 2015).

5.5.1 Clinical Picture

According to ICD-10, Conduct disorders (F91) are characterised by a repetitive and persistent pattern of dissocial, aggressive, or defiant conduct or behaviour. Any or many of following behaviours should be marked and must be present for at least a period of 6 months to meet the diagnostic criteria:

- *excessive levels of fighting or bullying*
- *cruelty to animals or other people*
- *severe destructiveness to property*
- *fire-setting*
- *stealing*
- *repeated lying*
- *truancy from school and running away from home*
- *unusually frequent and severe temper tantrums*
- *defiant provocative behaviour*
- *persistent severe disobedience*

Unlike the ordinary childish mischief or adolescent rebelliousness, these disorders are more severe, enduring and persistent, violate the age-

appropriate social expectations and do not include the isolated dissocial or criminal acts.

While making the diagnosis, child's developmental level at the time of act has to be taken into account. For instance, while temper tantrums at the age of 3 are deemed normal, violent crime or cruelty towards other humans or animals at the age of 6 or 7 is not within child's capacity and can be a serious contender for diagnosis. Also, these symptoms must not be attributable to underlying severe psychopathology like schizophrenia, mania, pervasive developmental disorder, hyperkinetic disorder, or depression.

ICD-10 further categorises conduct disorder as:

F91.0 Conduct disorder confined to the family context

Here, dissocial or aggressive behaviour is entirely or almost entirely confined to the home and/or to interactions with members of the immediate household; no significant conduct disturbance is observed outside the family setting and child's social relationships outside of family will be within the normal range. Disruptive behaviour arises due to marked disturbance in child's relationship with one or more members of the nuclear family or due to conflict with a newly arrived step-parent, and may include:

- stealing from the home;
- deliberately destructive behaviour, such as breaking of toys or ornaments, tearing of clothes, carving on furniture, or destruction of prized possessions;
- violence exclusively against family members; and
- deliberate fire-setting confined to the home.

F91.1 Unsocialized conduct disorder

This type of conduct disorder involves persistent dissocial or aggressive behaviour outside the family or home context and a significant pervasive abnormality in the individual's relationships with other children often seen as lack of effective integration into a peer group; disturbed peer relationships as evident chiefly by isolation from and/or rejection by or unpopularity with other children, and by a lack of close friends or of lasting empathic, reciprocal relationships with others in the same age group, and associated emotional disturbance; and discord, hostility, and resentment in relationships with adults;

Characteristic solitary offences may include:

- bullying, excessive fighting, extortion, or violent assault (in older children);
- excessive levels of disobedience, rudeness, uncooperativeness, and resistance to authority;
- severe temper tantrums and uncontrolled rages; and
- destructiveness to property, fire-setting, and cruelty to animals and other children.

Group offending may or may not be present.

F91.2 Socialized conduct disorder

This category applies to conduct disorders involving persistent dissocial or aggressive behaviour occurring in individuals who are otherwise well integrated into their peer group, i.e., they have adequate, lasting friendships with others of roughly the same age. The peer group may or may not comprise of other youngsters involved in delinquent or dissocial activities. Relationships with adults in general are non-problematic but with those in authority tend to be poor. Also, emotional disturbances are usually minimal. Often the symptoms are more pronounced in extra-familial settings, especially, school and playgrounds.

F91.3 Oppositional defiant disorder

Often seen as a less severe type of conduct disorder, oppositional defiant disorder has a characteristic early onset before the age of 9 or 10 years. It is defined by a pattern of persistently negativistic, hostile, defiant, provocative, and disruptive behaviour, which is clearly outside the normal range of behaviour for a child of the same age in the same sociocultural context, and an absence of serious violations of the rights of others as reflected in the aggressive and dissocial behaviour specified in earlier categories.

Symptoms include:

- frequent and active defiance of requests made by adults or rules with a deliberate intention to annoy other people;
- low frustration tolerance and readily lost temper;
- anger and resentment;
- tendency to be easily annoyed by other people and blaming others for own mistakes or difficulties;
- defiance of a provocative quality, deliberately instigating others, and initiating confrontations; and
- excessive levels of rudeness, uncooperativeness, and resistance to authority.

Interestingly, this behaviour is most evident in interactions with adults or peers whom the child knows well, and clinical observation of these signs may be difficult.

Find out the diagnostic criteria for Conduct disorder and Oppositional defiant disorder as given by DSM 5 and compare that with the ICD 10 criteria as discussed above.

Epidemiology

It is estimated that 2-16 % of children and adolescents have ODD in clinical settings; and in non-clinical samples, its prevalence ranges from 6-10% (Sanders et al., 2003). While some studies show no gender differences (Nock et al., 2007), other report that oppositional symptoms to be more common in younger boys than girls, with the behaviours in girls becoming more evident after puberty in older children (APA, 2013; Sanders et al., 2003).

Globally, the lifetime prevalence of conduct disorder in the general population is estimated at between 2-10% and is consistent across its different types, racial and ethnic groups. Gender differences are observed

with reported prevalence of 6-10% in male and 2-9% in female children, with the boy to girl ratio ranging from 4:1 to 12:1 (DSM-5, 2013). Indian studies report the prevalence of CD between 7.1 to 11.13 % (Deivasigamani, 1990; Sarkhel et al., 2006).

Both Oppositional Defiant Disorder and Conduct disorder occur comorbidly with other psychiatric conditions, particularly with ADHD, mood and anxiety disorders (Chen et al., 2013).

Developmental Progression

From a developmental perspective, neither ODD or CD are seen as short-lived, rather as conditions that might provide step-like progression to more serious adult issues. Research shows that in some cases, ODD remits after a period of 3 years (Biederman et al., 2008; Bunte et al., 2014), but if untended to, ODD may act a developmental precursor to CD in 20-40 % cases (Sanders et al., 2003), and further conduct disorder (25-40% of cases) may proceed to antisocial personality disorder in adulthood (ICD-10, 1993). This continuity is specially true in case of early onset ODD (Sanders et al., 2003) and early onset CD (Fraser & Wray, 2008).

5.5.2 Associated Functional Impairments and Complications

Children with ODD and CD are at an increased risk of abuse by parents and authority figures. Their behavioural symptoms are by default provocative and are seen as intentional instead of being an outcome of underlying pathology. While these behavioural exhibits should be seen from a intellectual, if not empathetic manner, there is lot of retaliation from others. Further, these acts seem defiant and threatening, and are often met with social exclusion and punishments, legal or otherwise. Parents tend to express negatively to these acts by labelling and criticising children and reducing warmth and involvement, which further escalates the symptoms and allow children to justify their actions (Moeller, 2001; Webster-Stratton & Reid, 2003).

A somewhat similar picture is repeated at school. Studies show that these children experience greater failure at school, more suspensions, expulsions, and drop-outs. Peer relations suffer equally, and with age and without intervention, these impairments become more disruptive leading to larger social and legal infractions, drug abuse and serious crime (Biederman et al., 2008; Burke et al., 2014; Johnson et al., 2015).

5.5.3 Etiology/ Causal Factors

Oppositional Defiant Disorder and Conduct Disorder have a complex etiology and are often a result of interaction of multiple biological and environmental factors, including:

- ***Genetics***

ODD/CD might have a genetic bases as studies indicate a moderate degree of heritability for antisocial traits, low frustration tolerance, aggression, impulsivity, insensitivity to punishment, and temperament that includes difficulty in regulating emotions, emotional reactivity and improper attachment styles (Baker et al., 2007). A close inspection of family tree also reveals close family members with psychopathologies like mood and anxiety disorders, and personality disorders.

- **Biological**

- Structural anomalies like neuropsychological defects or early life insult to certain areas of the brain, and/or seizures cause deficits in language, memory, and executive functioning which further lead to poor judgment, inability to plan and problematic behaviours.
- Low activity in frontal lobes of the brain and noradrenergic system (Mohan et al., 2021).
- Neuro-chemical imbalance like low levels of plasma dopamine beta-hydroxylase and 5-Hydroxy Indole acetic acid (5-HIAA), and high testosterone levels (Mohan et al., 2021).
- Developmental delays causing poor social skills, learning disability, below-average intellectual capacity, thus contributing to difficulties in learning, academic backwardness, low self-esteem, and the tendency for children to engage in disruptive behaviours.

- **Psycho- social Factors**

Parents and Family

- Poor parenting including lack of supervision, inconsistent or harsh discipline, use of force to get things done, verbal and physical aggression towards children, abuse and/or neglect.
- Home environment marked by presence of step-parent(s), chaos, lack of structure, marital conflicts between parents, and frequent exposure to domestic violence.
- Low parental educational attainment and low household income (Centre for Disease Control [CDC], 2013).
- History of mental disorders and/or substance abuse, criminality, and disruptive behaviours in caregivers.
- Self-Perpetuating Cycle- Given the genetic predisposition and difficult temperament of the child, parents often react in aggressive and authoritarian fashion and cannot engage in healthy parenting, leading to insecure attachment and a sense of rejection in child. It makes a vicious loop that aggravates the symptoms further.

School

- Large classroom size which lacks attention and feedback from teacher and allows anonymity and low accountability in students.
- Use of humiliation and corporal punishment as ways of discipline by teachers and school authorities.
- Rejection by peer group.
- Lack of supportive staff and counselling services.
- Early exposure to maltreatment, abuse or bullying at school.

Neighbourhood

Low socio-economic status and associated scenarios are important risk factors for development of behavioural problems. Studies report that poorest and most violent neighbourhoods as having the highest prevalence rates

of ODD and CD behaviours (Loeber et al., 2000) through overcrowding, scarcity, food insecurity, violence, and lack of access to peer support (CDC, 2013).

5.5.4 Intervention/Treatment

Both Oppositional Defiant Disorder and Conduct disorder are rooted in early familial and parent-child relational dysfunctions, and are accentuated by parental retaliation. A comprehensive multimodal treatment is required which involves the child, family especially parents and larger community resources, while keeping in mind factors like child's age, severity of symptoms, and associated psychopathology.

- **Pharmacotherapy**

Although there is no formally approved medication for ODD/CD, various medications might be used to target associated behavioural symptoms, thereby reducing the distress and producing immediate relief. These include stimulants and non-stimulants for ADHD (for improving attention and concentration, calmness, and reducing impulsivity), antidepressants for depressive symptoms, mood stabilisers for aggression, and even antipsychotics.

- **Psychosocial Treatments/ Psychotherapy**

In terms of psycho-social interventions, three key actors are targeted- the child, the family and the community.

(a) *Child- oriented techniques*

- **Anger Management and Mood Regulation Training:** Anger management focuses on understanding reasons for and regulating ways to control one's frustration and aggression. It involves techniques like '*think before you speak, counting backwards, timeout, use of humour*' etc. to regulate mood and channelise feelings.
- **Cognitive Behavioural Therapy:** It focuses on identifying inflexible and maladaptive thought patterns and distortions like '*over-generalisation, all-or-none thinking, negative abstraction*' which lead to distrust of and aggression towards others as well as poor problem solving. Once identified, the therapist and child work together to change these dysfunctional cognitions for more functional ones so that overt behaviour could improve.
- **Behaviour Modification:** It involves behavioural techniques like systematic use of reinforcement for desirable behaviour, and punishment and omission for removing undesirable behaviour. As an extension, the therapist may also use differential reinforcement schedules for selectively reinforcing certain behaviour while withholding for others.
- **Social Skills Training:** It aims to help the child understand the verbal and non verbal social cues, restraining of socially unacceptable impulses or acts, to develop positive and effective interaction with peers and others, perspective taking and learning empathy, interpersonal skills, assertiveness training, and conflict resolution.

(b) *Family- oriented techniques*

- Family Therapy: Understanding the family dynamics, faulty communications and sources of conflict, and negative emotions like over-involvement, detachment and criticism; and improving two-way flow of interaction with a focus to generate harmony and co-operation within family.
- Parent Management Training (PMT): Its chief goal is to help parents develop positive parenting skills that involve consistent discipline, reliable rewarding for desirable behaviours and restrain on undesirable behaviour with proper explanation.
- Parent-Child Interaction Therapy (PCIT): PCIT involves parallel coaching of parents by the therapist while they are interacting with their child. For instance in '*behind the mirror technique*' of PCIT, the therapist observes the parent-child interaction while sitting behind a one-way mirror and by using ear phones simultaneously guides parents to be more effective in their communication with child, thereby improving parent-child relationship and decreasing problem behaviour.

(c) *Multi-systemic therapy*

It holistically targets family, school, individual and the community, and aims at generating awareness about disruptive behaviour disorders and acceptance of child, improving academic functioning and provision of special set-ups and structured program to reduce disruptive behaviours.

- **Prevention**

Screening, recognition, prevention and early intervention is deemed essential in case of ODD/CD. Recognising and acting on symptoms when they first appear can minimise distress to the child and family. Providing a protective, nurturing and most importantly a balanced and consistent home and neighbourhood environment might help reduce symptoms and prevent episodes of defiant behaviour.

Self Assessment Questions 2

1. Differentiate between suicidal ideation and suicide attempt.
2. What is the stage of disinhibition in suicide?
3. Explain the Interpersonal Theory of Suicide.
4. Differentiate between oppositional defiant disorder and conduct disorder.
5. What is social skills training?

5.6 LET US SUM UP

The present unit focused on certain disorders commonly occurring during childhood. In this, you learned about depression and suicide in children. The diagnostic features of these two mental health conditions were described. Further the etiology and therapeutic intervention measures were also explained. The unit also discussed oppositional defiant disorder and

conduct disorder in children and pointed out the difference between the two. You also learned about the causal factors and the therapeutic intervention measures for these disorders.

5.7 KEY WORDS

Attachment: Innate propensity of human beings to establish strong and long-lasting affective ties with other people (Bowlby, 1976).

Schema: A cognitive belief that are acquired early in life and act as a filtering mechanism that helps us make sense of an experience.

Cognitive triad: It refers to negative views about oneself, the world and the future.

Emotion thermometer: It shows a range of emotions from 0 (with a smiling face) to 10 (with a frowning face) and child is taught to monitor and regulate their emotions using it.

Cognitive Behaviour therapy (CBT) Focuses on identifying and challenging maladaptive schemas, automatic thoughts, and cognitive distortions that force an individual to negatively evaluate experiences and hence are depressogenic.

Dysfunctional Thought Record: Records the thoughts, feelings and emotions of the client with regard to a particular stressful situation.

Psychoeducation: Aims at educating parents and family members about the child's depression to generate better understanding, acceptance, and participation.

Suicide Ideation: Pre-occupation with death and dying, talking about suicide, often searches online for ways to die.

Dialectical behavior therapy: Aims to teach children and adolescents to live in the moment, develop healthy ways to cope with stress, regulate emotions, and improve their relationships with others.

Parent-Child Interaction Therapy (PCIT): Involves parallel coaching of parents by the therapist while they are interacting with their child.

5.8 ANSWERS TO SELF ASSESSMENT QUESTIONS

Answers to Self Assessment Questions 1

1. The key symptoms of depression include depressed mood, loss of interest and enjoyment, reduced energy, increased fatigability (even after slight effort) and diminished activity (ICD-10).
2. Neuro-chemicals such as serotonin, dopamine, and norepinephrine which are linked to important life functions, are found to be less than required quantities in children with depression.
3. Pessimistic or depressogenic attribution for a negative event occurs as internal (blames self), stable (beliefs that the outcome is permanent) and global (same for all situations).
4. Cognitive distortions are errors in thinking such as tendency to think in extremes, or indulge in self-blame etc.

5. Self-monitoring, self-evaluation, and self-administration of consequences.
6. Thought sampling refers to recording of thoughts at a random interval to get a sample of cognitive patterns.

Answers to Self Assessment Questions 2

1. Suicidal ideation is thinking about suicide and wanting to take one's own life; whereas Suicide attempt is a potential self-injurious act which does not lead to death but may result in serious injury.
2. Stage of disinhibition is the last stage in suicide where meaningful thought is impaired, fear of death is reduced, physical pain tolerance increases, and drastic measures like suicide become highly acceptable.
3. Interpersonal Theory of Suicide proposed that perceptions of low belongingness and high burdensomeness combine to bring about desire for suicide, whereas high capability for suicide facilitates potentially lethal suicide attempts.
4. Oppositional defiant disorder is characterised by hostile, defiant, or disobedient behaviour; whereas Conduct disorder involves serious violations of rights of others and antisocial behaviours such as lying and stealing which can result in criminal, educational, and familial consequences.
5. Social skills training aims to help the child understand the verbal and non verbal social cues, restraining of socially unacceptable impulses or acts, develop positive and effective interaction with peers and others, perspective taking and learning empathy, interpersonal skills, assertiveness training, and conflict resolution.

5.9 UNIT END QUESTIONS

1. Explain the attachment theories in relation to childhood depression.
2. Elaborate the cognitive behavioural perspective of depression in children.
3. What are the important causal factors in development of depression?
4. What are the important risk and protective factors in suicide?
5. What are the stages of suicide? Do you think suicide can be prevented? If yes, how?.
6. Provide the clinical picture of oppositional defiant disorder and conduct disorder and explain the measures for their therapeutic intervention.

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5.11 SUGGESTED READINGS

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UNIT 6: AUTISM SPECTRUM DISORDER AND ATTENTION DEFICIT HYPERACTIVITY DISORDER*

Structure

- 6.1 Learning Objectives
- 6.2 Introduction
- 6.3 Autism Spectrum Disorder (ASD)
 - 6.3.1 Clinical Picture in ASD
 - 6.3.2 Causal Factors and Treatment of ASD
- 6.4 Attention Deficit Hyperactivity Disorder (ADHD)
 - 6.4.1 Clinical Picture in ADHD
 - 6.4.2 Causal Factors of ADHD
 - 6.4.3 Treatment of ADHD
- 6.5 Let Us Sum Up
- 6.6 Key Words
- 6.7 Answers to Self Assessment Questions
- 6.8 Unit End Questions
- 6.9 References and Suggested Readings

6.1 LEARNING OBJECTIVES

After studying this Unit, you would be able to:

- *Explain the clinical picture, causal factors, and treatment of Autism Spectrum Disorder (ASD); and*
- *Elucidate the clinical picture, causal factors, and treatment of Attention Deficit Hyperactivity Disorder.*

6.2 INTRODUCTION

The present Unit will discuss about Autism Spectrum Disorder (ASD) and Attention Deficit Hyperactivity Disorder (ADHD). You will also learn about Intellectual disability and Specific learning disorder in the next Unit 7. All these disorders begin in childhood and continue to adulthood. These are categorized under the broader heading of **Neurodevelopmental disorders** which refer to a group of severely disabling conditions considered to be a result of structural and/or functional differences in the brain that are usually evident at birth or become apparent as the child begins to develop.

It is important to note that one needs to be very careful about diagnosing a mental health condition in children. **First**, behaviours related to mental health issues and conditions might get confused with the normal/typical behaviour

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exhibited by children. Hence, one needs to be careful in diagnosis. **Second**, the behaviour of the child always need to be discussed in the context while considering a diagnosis. To assess whether a child's behaviour is 'normal' or not, the behaviour needs to be compared to a sample of children of the same age group, educational level, and socio-cultural background. For instance, temper tantrums are common in two-year-old children but not for a 10-year-old child. Consequently, a child's behaviour is understood as typical or atypical to his/her peers. **Third**, clinicians need to exercise care and caution in diagnosing a child. They must understand that the repercussions of the label 'abnormal' for a child or adolescent are immensely stigmatizing and has significant implications in determining the future outcomes for the child as an adult.

6.3 AUTISM SPECTRUM DISORDER

The term Autism is derived from the Greek word *autos* meaning self, used by **Eugen Bleuler** (Swiss psychiatrist) for the first time. Autism is a neurodevelopmental condition that is usually identified before a child is 30 months of age and may be suspected in early weeks of life. Autism is a condition that affects social communication and is associated with repetitive patterns of behaviour. DSM-5 has combined four independent diagnoses, that is, Autistic disorder, Asperger syndrome, Pervasive developmental disorder-not otherwise specified (PDD-NOS) and Childhood disintegrative disorder into one diagnosis of Autism Spectrum Disorder (ASD). Recent researches have suggested that all these disorders have the same essential symptoms, varying in degrees of severity. No two children with ASD are alike, they have wide range of deficits, abilities, difficulties, and challenges, therefore, spectrum was found to be a suitable word to describe individuals with autism.

Box 6.1 Case Study: Autism Spectrum Disorder

Abhishek is 5 years old. His mother took him to a doctor to get his hearing tested at 2 years of age when he would not respond to his name and had not started speaking even a single word. Even at 5 years of age, Abhishek would turn his head away whenever someone would speak to him. Sometimes he would mumble something unintelligible. Although toilet trained and able to feed himself, schools asked his parents to take him out of school, because Abhishek would not mingle with other children. He actively avoided being touched and, on some days, he would start to cry and scream and no amount of cajoling or loving him would soothe him. Inconsistent eye contact and repetitive behaviour like lining up of his toy cars can be seen. When seated, he often rocks back and forth in a rhythmic motion for hours. Any change in routine is highly upsetting to him.

6.3.1 Clinical Picture in ASD

Lack of reciprocal social interaction is amongst the earliest markers of autism, irrespective of cognitive or language ability. In infancy, the child seems to be aloof from others. Mother's remember that babies diagnosed with autism later in life fail to respond to their name, do not reach out when picked, would never smile or look at family when they are played with, or may not notice people - family and strangers alike coming and going from

the room. This may make people assume that children with autism do not have the ability to express emotions or may lack emotions,

However, the fundamental problem in autism comes from lack of social understanding. As children with autism grow older, deficits in social understanding can be seen in lack of initiation for social interactions with others, social interaction is restricted to getting obvious needs met such as food and water, the children appear to be content with being alone and may ignore parents bid for attention, and inconsistent eye contact although not reported for all children, but has been reported for many children on the spectrum. Some children may approach others in an unusual manner, for example, by licking, smelling or biting.

In teenagers, the social deficits are not manifested in seeming lack of social interest, but in inability to maintain relationships appropriate to age level. This is because in adolescence, an individual is faced with a more complex social milieu, a person on the spectrum may lack the ability to understand social conventions, making socialization extremely challenging. For instance, the person may have difficulty in understanding jokes, irony, sarcasm, and faux pas and because of this may become a victim of bullying in school.

Individuals with autism find it difficult to understand and use verbal and non-verbal communication. Deficits in verbal communication include, delay in language development, mutism (inability to acquire speech), idiosyncratic uses of speech (unusual ways of using some words), immediate or delayed echolalia (repetition of words or phrases either immediately or later sometime), or inability for pragmatic use of speech (inability to use language for everyday social interactions). Individuals with autism may fail to initiate, maintain, or respond to conversations; engage in one-sided conversations which makes others who have no understanding of autism to reject them. Additionally, children with ASD find it challenging to understand non-verbal gestures, cues, and body language of others. About 70 percent of human communication is largely non-verbal in nature; deficits in verbal and non-verbal communication prove to be a major impediment for successful socialization even for extremely intelligent people on the spectrum.

Box 6.2: DSM-5 Criteria for Autism Spectrum Disorder (APA, 2013)

- A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive; see text):
- 1) Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
 - 2) Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a (total lack of facial expressions and nonverbal communication).

- 3) Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.
- B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):
- 1) Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
 - 2) Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
 - 3) Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
 - 4) Hyper or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).
- C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).
- D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.
- E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

Social and communication deficits have a reciprocal relationship in autism. An innate inability for socialization affects language development in the child, language and communication deficits in turn lead to challenges with socialization as the child grows up. Understanding of this reciprocal relationship between socialization and communication deficits led DSM-5 to assimilate socialization and communication impairments under a single heading, ‘**social-communication**’ impairments. Social-communication impairments in autism have been attributed to the inability of individuals

with autism to ‘read people’s minds’ also known as *mindblindness*. Mindblindness refers to the difficulty in seeing things the way other people do and make educated guesses about what other’s may be thinking or feeling. This skill helps typical people navigate a number of social situations. For instance, if a typical child finds her/his friend sitting and sulking, she/he is likely to enquire about the reason for her/him sulking, whereas a child with autism may be unable to ‘read’ the non-verbal gestures of sulking and start talking about a topic that greatly interests him/her.

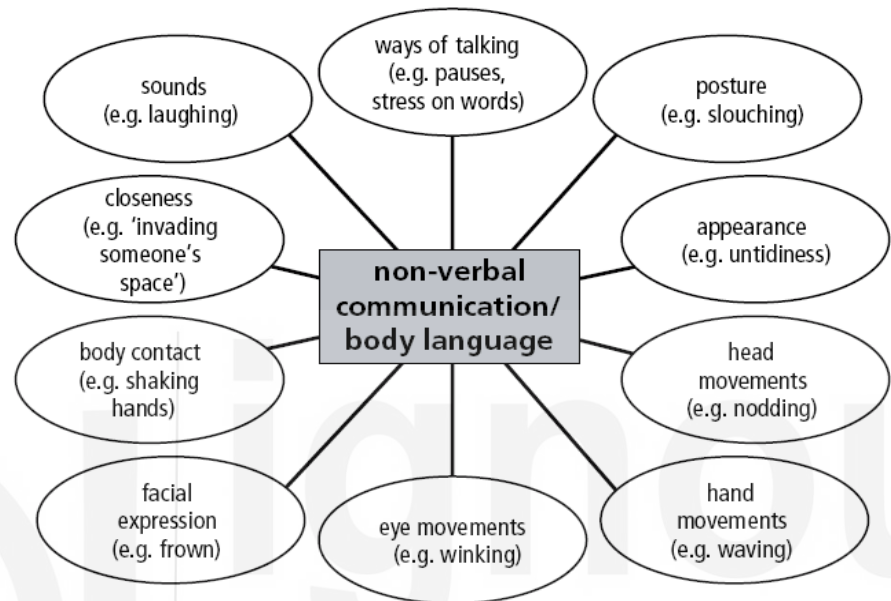


Fig. 6.1: Non-Verbal Communication

Along with social-communication difficulties, autism is characterised by a number of **behavioural difficulties** in autism. Children with autism may engage in stereotyped or repetitive speech, motor movements, or use of objects. For instance, they may engage in self-stimulation i.e. repetitive movements as head banging, spinning, and rocking, which may continue by the hour. Lining up of objects is also commonly seen in children. Excessive adherence to routines or rituals and resistance to changes in routines can also be seen with children on the spectrum. The child may insist of taking the same route every day, or make the bus stop at a particular point only then would the child get down.

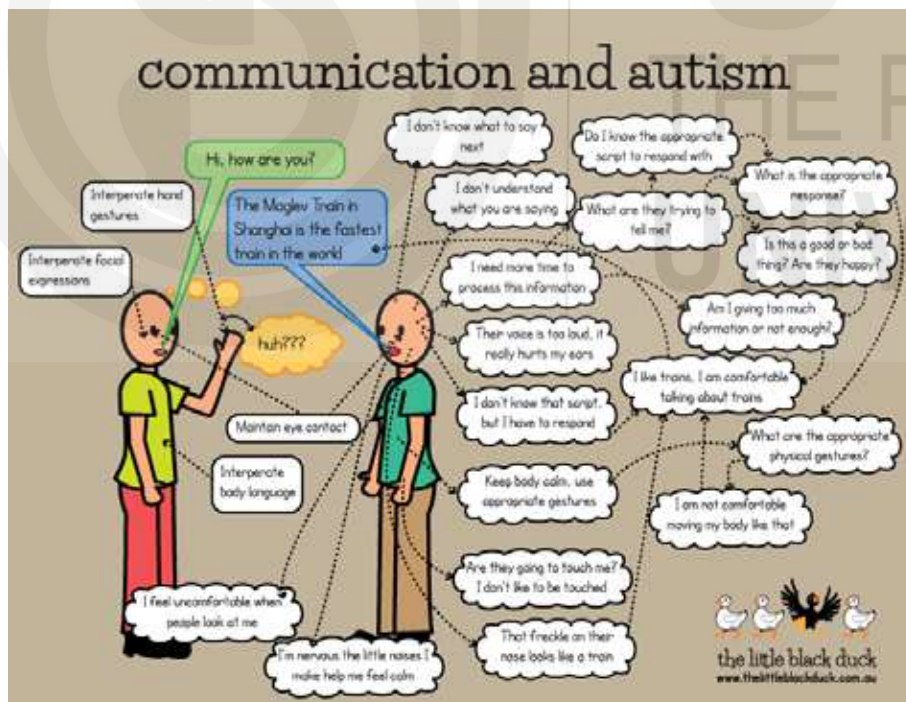
Children may form strong attachments to unusual objects like rocks, keys, and light switches so much so that the attachment may interfere with other activities. Highly restricted interest of unusual magnitude is not just limited to objects such as pens, keys, action, figures, and particular toys but may also extend to topics like dinosaurs or trains. Changes in the environment, stereotypical routine, and/or an object with strong attachment leads to resistance from the child ranging from discomfort to crying spell that continue until the situation is restored.

Finally, an addition to DSM-5 diagnostic criteria for autism is **sensory difficulties**. Sensory difficulties, i.e., hyper or hypo reactivity to sensory input from the environment such as indifference to pain/heat/cold, over-under reaction to certain sounds, distaste for certain food to the point of being nauseous when made to eat it, fascination with lights etc. are

pervasive and independent of age and ability. Although individuals with autism have always experienced sensory hyper/hypo reactivity, practitioners have only recently acknowledged it, because of the social-communication difficulties inherent in autism. For instance, a child with autism would cry when getting hair or nails cut, she/he may refuse to wear socks, or t-shirts with labels because of hyper sensitivity to tactile stimuli. But many adults would interpret this as disruptive behaviour instead of sensory difficulties in autism.

Autism has a high comorbidity with intellectual disability. Earlier estimates indicated that approximately 70 percent of individuals with autism also had intellectual disability (Fombonne, 2005). However, recent estimates have estimated that 50 percent of individuals with autism are also intellectually impaired (Polynak, Kubina & Girirajan, 2005). This shift in the distribution has been primarily attributed to an increase in identification of high functioning children with autism, who were earlier missed out because their cognitive abilities would often mask other deficits.

Unlike children with intellectual disability, children with autism are quite adept at puzzles and fitting objects together often performing better than even typical children. However, difficulties meaning is apparent, for instance, if a child with autism is asked to arrange pictures in an order so that they communicate a story, she/he is likely to perform poorer than typical children.



6.3.2 Causal Factors and Treatment of ASD

Although most scientists believe that autism is an innate condition that affects the development of the nervous system of a child, the precise cause/causes of autism are unknown. Evidence from role of genetics in the etiology of autism comes from studies examining the incidence rates of autism in families. To have a parent or sibling with autism raises the chance

of an individual to have autism. According to WHO, 1 in 160 children has ASD. A family with one child with autism have greater risk of having another with autism. Twin studies have shown higher concordance for monozygotic (60%) than dizygotic twins. Relatives of people with autism may show sub-threshold social-communication deficits. Genetic researches in autism has been found autism to be related to the faulty working of the brain's glutamate neurotransmitter system. However, it is unclear how the genetic vulnerability transmits to leads to faulty wiring in early stages of development.

Expression of the autism genes may be influenced by environmental factors. Prenatal environmental factors (exposure to radiation, toxins, alcohol, drugs, infections etc.) and pregnancy related factors (uterine bleeding, Rh incompatibility, induced or prolonged labour, oxygen requirements at birth) have been implicated in children with autism.

Based on the recent researches it is important to note that there is no cure for autism. In spite of that, many children continue to be subjected to the many fads in the market, promising them a 'cure' for the condition. Many researchers and parents conceive autism to be unlike other mental illnesses like depression and anxiety. Autism is seen as a condition, that leads to differences in brain wiring relative to the typical population, Treatment of autism includes management of problematic behaviours as well training of teachers, schools, and workplaces to understand and make space for the challenges of autism.

In the past medications for autism have proven to be effective. Currently medicines are only prescribed for aggression and hyperactivity that may be excessive and leading to self-harm. Behavioural therapy has been found to be successful in development of some social and communication skills and elimination of problematic behaviour. A successful intervention involves one-to-one teaching of skills every day for several years in diverse settings of the child i.e. clinic, school, and home. Adults including parents and teachers are taught principles of behavioural therapy, such as use of rewards and breaking down of complex tasks into smaller tasks. Use of punishment or aversive techniques must be avoided.

1. Self Assessment Questions

- 1) Which of the following is a sign of Autism?
 - a) 2-year-old child does not react or respond when his name is called.
 - b) Child consistently does not seem interested in the reactions of others, even the reactions of parents.
 - c) Person does not seem aware of the feelings of others.
 - d) All of the above.
- 2) Which of the following causes Autism?
 - a) Cold parenting

- b) Poor prenatal nutrition
- c) A single gene or chromosome
- d) There is no known single cause
- 3. Individuals with autism find it difficult to understand and use both verbal and non-verbal communication. True or False
- 4. Mindblindness refers to the difficulty in reading one's own mind. True or false
- 5. In autism, children may form strong attachments to unusual objects like rock, keys etc. True or false.
- 6. Sensory difficulties refer to hyper or hypo reactivity to sensory input from the environment. True or False
- 7. Autism can be cured. True or false.

6.4 Attention-Deficit/Hyperactivity Disorder

Children with Attention-Deficit/Hyperactivity Disorder (ADHD) display difficulties in maintaining sustained attention, excessive and exaggerated motor activity, and impulsivity relative to their developmental level leading to social, occupational/academic activities. DSM-5 classification lists it as a neurodevelopmental disorder. It specifies several inattentive or hyperactive-impulsive symptoms to be present prior to 12 years of age and can be classified in terms of the current severity as mild, moderate and severe. There are three sub-types of Attention Deficit/Hyperactivity Disorder such as: combined presentation, predominately inattentive presentation (Attention Deficit Disorder; ADD) and predominately Hyperactive/Impulsive presentation. ADHD combined type is the most common presentation, whereas ADHD predominantly inattentive type may be cases of pure ADD or may include children who display attention difficulties along with sub-threshold hyperactivity.



Fig. 6.2: Symptoms of ADHD

6.4.1 Clinical Picture in ADHD

Attention deficit is a multi-dimensional construct that includes problems with arousal, alertness, selective focus, sustained attention/vigilance, and distractibility. These difficulties can manifest in many situations making it difficult to function adequately in school, workplace or with friends and family. Issues with *arousal and alertness* can lead to children failing to give attention to details, losing track of time or things, making careless

mistakes or day dreaming. A child with deficit *selective attention* is likely to fail to understand instructions and follow through instructions. She/he could appear to others as if she/he is “not listening” or that their “mind is elsewhere”. Problems with *sustained attention* can most often be seen in boring and repetitive activities but can also be apparent in free play. The child has a tendency to “tune out” of these tasks, and tasks requiring sustained attention (e.g. reading, mathematics, board games, etc.) are seen as aversive and are generally avoided. Sustained attention deficits may lead the child to shift from one task to another without completing any one of them.

Finally, *distractibility* is the ability to be easily attend to irrelevant stimuli in the environment (e.g. noise, background conversations, object in a room, etc.). Attentional difficulties affect daily lives of people with ADHD. Their work is often messy, disorganized and appears to have been done without any considered thought. School material like pen, tiffin boxes, books and notepads are often scattered, lost or damaged. Attentional problems also make children and adolescents forgetful, for instance they would forget to bring lunch, books, homework etc. Socially, ADHD individuals find it difficult to keep track of conversations. Such children often find it challenging to follow rules in games or different activities.

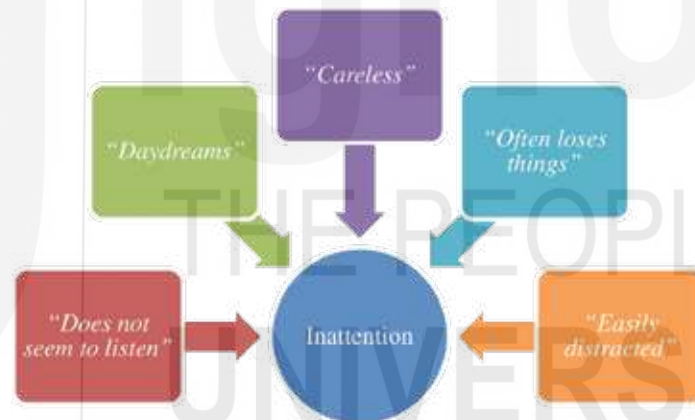


Fig. 6.3: Descriptions used by Parents and Teachers for Children with Significant Attentional Difficulties

Hyperactivity refers to excessive activity manifested in two forms: *motor hyperactivity* (restlessness, squirminess, and unnecessary body movements) and *vocal hyperactivity* (excessive talking). Manifestation of hyperactivity may vary with developmental level. In pre-school children hyperactivity can be seen in children to engage in excessive jumping and climbing on furniture, running around the house, and in difficulty in engaging the children in sedentary activity like listening to story. In school aged children similar behavior may be seen in hyperactive children although the behavior maybe lesser in intensity and frequency. Hyperactivity in children can be seen in the child’s difficulty to remain seated, they get up frequently, squirm, and hang onto the edge of their seat. Not only do they fidget during academic activities, they also find it challenging to sit through meals, TV, or play that requires them to sit in one place. One is likely to find them fidgeting with objects, pen, or shaking legs.

Girls with ADHD are more likely to display hyperactivity through excessive

talking and interruptions when others are talking. It is a common misbelief that adolescents/adults “out grow” their hyperactivity. However, in older children hyperactivity manifests more as restlessness, excessive speech, difficulty in engaging in solitary activities and increased aggression and conflicts. Professionals stress on pervasiveness of hyperactivity, ADHD children display hyperactivity throughout the day and even during night. ADHD children find it difficult to fall asleep and may wake up early. Hyperactivity is pervasive and displayed in all domains including home, school, and playground.



Fig. 6.4: Descriptions Used by Parents and Teachers for Children with Hyperactivity

Impulsivity is one of the most common complaints parents and teacher’s make about children with ADHD. Impulsivity refers to the tendency to act on urges, apparently without thinking. Most common complaint made about children with ADHD by parents and teachers is about this symptom. Impulsivity can be seen in impatience, difficulty in waiting for their turn, interrupting and intruding others to the point of causing difficulties in school, social or occupational setting. Impulsivity is often responsible for the many accidents that hyperactive children get into. More often than not children with ADHD may knock over objects, bang into people, grab to hold a hot pan, or even engage in potentially harmful activity like repeatedly climbing trees and riding bicycle in traffic.

Children with ADHD also display some secondary problems. ADHD is related to cognitive and academic difficulties as children with ADHD are found to have delay in intelligence of about 7-10 IQ points, may be at high risk for learning disability, and have lower academic intelligence than their peers. Many children with ADHD suffer from socio-emotional difficulties also. There is high rate of rejection by peers amongst ADHD children, which is not because they are unfriendly but because ADHD may make them inattentive to social cues and peers may get tired of their hyperactivity and excessive talking. Unpopularity amongst peers may also be a result of aggression and depression. Peer rejection and negative criticism from parents and teachers negatively affects the self-esteem of these children.

Box 6.3: Case Study: Attention Deficit Hyperactivity Disorder

Rubin is a 9-year-boy who has been referred to a child psychologist at the request of his school counsellor. The counsellor had been receiving multiple complaints about Rubin from his class teacher. The teacher complained that

Rubin is extremely restless, he is hardly ever on his seat and roams around in the class in spite of the many instructions given against getting up in class. He finds it difficult to pay attention to lessons in class and his work is messy and incomplete. His restlessness disturbs other children. Sometimes, he talks to other students making it difficult for them to concentrate on their individual classwork.

The teacher reports that Rubin does not seem to have any control over his unpredictable behaviour and is quite polite and good natured. Clinical interview with parents revealed that Rubin has had behavioural difficulties ever since he was a toddler. Even when he was three years old, he was and extremely restless who required little sleep and woke before anyone else. When he was four, he had managed to unlock the door of the house and wandered off by himself on a busy road. He was brought back by a neighbour who found him wandering on the streets. Teachers in play school complained that Rubin would find it difficult to follow any instructions given to him and his restlessness made it difficult for the teacher to look after his well-being.

The prevalence rate of ADHD has been increasing over the years. The average prevalence of ADHD worldwide is found to be 5.9 - 7.1 percent and 2.6 - 4.5 percent (Willicut 2012, Polanczyk et al. 2015). Some researchers believe that the increase in the number of children diagnosed with ADHD may be a result of an increase in awareness about ADHD or society's intolerance to childhood activities because of urban life pressures and loss of support, or extended family. Also, boys are three times more likely to be diagnosed with ADHD. This may be because adults may be more tolerant of hyperactivity in girls who engage in less direct aggressive. Secondly, research on ADHD has focussed on boys, thereby ignoring the experience and manifestation of ADHD symptoms in girls. There is high co-morbidity of aggression and depression in ADHD.

Box 6.4: DSM-5 Criteria for ADHD (APA, 2013)

A. A persistent pattern of inattention and/or hyperactivity- impulsivity that interferes with functioning or development, as characterized by (1) and/or (2):

1) **Inattention:** Six (or more) of the following symptoms have persisted for at least 6 months (for children up to age 16) to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:

Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.

a) Often fails to give close attention to details or makes careless mistakes in school work, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate).

- b) Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading).
- c) Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction).
- d) Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily side-tracked).
- e) Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganized work; has poor time management; fails to meet deadlines).
- f) Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults, preparing reports, completing forms, reviewing lengthy papers).
- g) Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
- h) Is often easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).
- i) Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults, returning calls, paying bills, keeping appointments).

2) Hyperactivity and impulsivity: Six (or more) of the following symptoms have persisted for at least 6 months (children up to the age of 16 years) to a degree that is inconsistent with developmental level that negativ impacts directly on social and academic/occupational activities:

Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or a failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.

- a) Often fidgets with or taps hands or feet or squirms in seat.
- b) Often leaves seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place).
- c) Often runs about or climbs in situations where it is inappropriate.

(Note: In adolescents or adults, may be limited to feeling restless.)

- d) Often unable to play or engage in leisure activities quietly.

- e) Is often "on the go," acting as if "driven by a motor" (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with).
 - f) Often talks excessively.
 - g) Often blurts out an answer before a question has been completed (e.g., completes people's sentences; cannot wait for turn in conversation).
 - h) Often has difficulty waiting his or her turn (e.g., while waiting in line).
 - i) Often interrupts or intrudes on others (e.g., butts into conversations, games, or activities; may start using other people's things without asking or receiving permission; for adolescents and adults, may intrude into or take over what others are doing).
- B. Several inattentive or hyperactive-impulsive symptoms were present prior to age 12 years.
- C. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities).
- D. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning.
- E. The symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal).

6.4.2 Causal Factors of ADHD

Researchers understand that the causes of attention deficit hyperactivity disorder are not social in origins. **Genetic factors** play a role in ADHD as twin and family studies report high degree of heritability of ADHD. Adoption researches have also reported higher rates of hyperactivity in biological parents of hyperactive children than adoptive parents of such children. Molecular genetic studies have found that multiple genes contribute to the risk for ADHD. In particular, DAT-1 or dopamine transporter gene has been implicated.

Neuropsychological studies have found structural and functional difference in brains of people with ADHD and typical control. In particular, difference have been seen in frontal lobe, basal ganglia, and cerebellum. Executive functions (high order cognitive processes), such as working memory, attention, and inhibition of responses has been found to be poorer for ADHD individuals relative to typical control. ADHD is related to dysfunction in two neurotransmitters, dopamine and nor-epinephrine. Scientists have found that inattention and distractibility appear to be related to low levels of norepinephrine whereas impulsivity and hyperactivity problems appear to be related to low levels of dopamine in the brain.

Thus, because child feels lack of stimulation in the brain, hyperactivity is a way to compensate for that. That is why, stimulants are prescribed as medicines for children with ADHD. Pregnancy and birth factors like mother's age at delivery (younger), mother's educational level (lower), time between labour (longer), and premature delivery related to higher probability of the child developing ADHD. Prenatal exposure to environmental toxins like lead, alcohol and tobacco have been implicated. Certain medicines, such as medicines for seizures are likely to result in problems with in attention and hyperactivity. Some researchers also report that the behavior of some ADHD children is worsened after eating foods with artificial colors, certain preservatives, and/or allergens.

While **social factors** like parenting style, schooling, and peer relations may moderate the types and degrees of impairment but they do not cause ADHD. Overall critical, harsh and negative behaviour of parents of hyperactive children is related to difficult, disruptive and non-compliant behaviour of ADHD children. Early television viewing has also been found to shorten attention span of children. Aggressive and hyperactive portrayal of characters in TV shows has also been found to exaggerate difficult behavior.

6.4.3 Treatment of ADHD

Some of the treatment options for ADHD are indicated below:

Prescription of medicine like Ritalin (methylphenidate), an amphetamine in some children with attention deficit hyperactivity disorder is a common treatment for ADHD. Ritalin is a stimulant and has a quietening effect on a child with ADHD, opposite of what is expected for a typical adult for whom stimulant leads to increased arousal and experience of excess energy. Ritalin has been found to help children reduce restlessness and aggression, helping them focus on studies and moderate difficult behaviours in classroom and home. Some significant side effects are also related to the use of Ritalin in children including decreased blood flow to the brain, which can result in impaired thinking ability and memory loss; disruption of growth hormone, leading to suppression of growth in the body and brain of the child; insomnia; psychotic symptoms; and others. Medicines like Ritalin do not cure ADHD, but they do result in moderation of behavioural symptoms.

Psychological interventions along with medications are important in providing holistic treatment. Behavioural strategies include selective reinforcements in classroom and structuring of material in a way that enhances the experiences of success. For instance, a girl with ADHD should be praised for increasing the amount of time she sits in classroom even if she sits for 15 minutes in a half an hour class, if she was unable to previously sit for anything more than say five minutes. Family therapy helps in making parents and sibling understand behavioural strategies to maximize productive behavior and extinction of aggressive and destructive behavior.

School based intervention programs aim to teach teachers to deal with hyperactivity and inattention difficulties in classroom.

Self Assessment Questions 2

1. Which of the following is NOT an example of a neurodevelopmental disorder?
 - a) ADHD
 - b) Childhood Depression
 - c) ASD
 - d) SLD
2. Developmental disorders refer to those conditions that occur _____ in life.
 - a) Early
 - b) Late
 - c) After retirement
3. Children with _____ disorder seem to have particular difficulty controlling their activity in situations that call for sitting still, such as in the classroom or at mealtimes.
4. Hyperactivity refers to excessive activity manifested in two forms: _____ hyperactivity and _____ hyperactivity.
5. Selective attention deficits may lead the child to shift from one task to another without completing any one of them. True or False.
6. Social factors like parenting style, schooling, and peer relations may moderate the types and degrees of impairment are responsible for causing ADHD. True or False
7. Name the three main sub-types of ADHD.

6.5 LET US SUM UP

In the present Unit you learned about two of the important developmental disorders that can affect children. These are Autism spectrum disorder (ASD) and Attention deficit hyperactivity disorder (ADHD). These are also called neurodevelopmental disorders which have a heritable component. You learned about exercising care and caution while diagnosing mental health conditions in children and adolescents. The unit presented the clinical picture in ASD. Autism is a condition that affects social communication and is associated with repetitive patterns of behaviour. Although there is no cure for autism, behavioural interventions and parent/teacher training program can help with problematic behaviours of children with ASD. Behavioural therapy has been found to be successful in development of some social and communication skills and elimination of problematic behaviour in autism spectrum disorder.

You also learned about the diagnostic features, causal factors and treatment in case of ADHD. Children with Attention deficit hyperactivity disorder display difficulties in maintaining sustained attention, excessive and exaggerated motor activity, and impulsivity relative to their developmental level, which affects their academic, social, and occupational activities. Various psychological and school-based interventions for the treatment of ADHD were also discussed.

6.6 KEY WORDS

Neurodevelopmental Disorders: A group of severely disabling conditions considered to be a result of structural and/or functional differences in the brain that are usually evident at birth or become apparent as the child begins to develop.

Autism: A condition that affects social communication and is associated with repetitive patterns of behavior.

Echolalia: Repetition of words or phrases either immediately or later sometime.

Mutism: Inability to acquire speech.

Distractibility: Easily attends to irrelevant stimuli in the environment (e.g. noise, background conversations, object in a room, etc.).

Impulsivity: The tendency to act on urges, apparently without thinking.

Mindblindness: Difficulty in seeing things the way other people do and make educated guesses about what other's may be thinking or feeling.

Attention Deficit Hyperactivity Disorder: Includes difficulties in maintaining sustained attention, excessive and exaggerated motor activity, and impulsivity relative to their developmental level, which affects their academic, social, and occupational activities.

6.7 ANSWERS TO SELF ASSESSMENT QUESTIONS

Answers to Self Assessment Questions 1

1. d
2. d
3. True
4. False
5. True
6. True
7. False

Answers to Self Assessment Questions 2

1. b
2. a
3. Attention deficit/Hyperactivity disorder
4. Motor hyperactivity and vocal hyperactivity
5. False
6. False
7. Inattention, hyperactivity, and impulsivity

6.8 UNIT END QUESTIONS

1. Discuss the clinical features of autism spectrum disorder.
2. Provide the clinical picture of Attention Deficit/Hyperactivity Disorder.
3. Explain the causal factors related to ASD.
4. Describe the intervention measures for children with ADHD.

6.9 REFERENCES AND SUGGESTED READINGS

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UNIT 7: INTELLECTUAL DISABILITY AND SPECIFIC LEARNING DISORDER*

Structure

- 7.1 Learning Objectives
- 7.2 Intellectual Disability : Definition
 - 7.2.1 Clinical Picture in Intellectual Disability
 - 7.2.2 Causal Factors of intellectual disability
 - 7.2.3 Management for intellectual disability
- 7.3 Specific Learning Disorder
 - 7.3.1 Clinical Picture in specific learning disorder
 - 7.3.2 Causal Factors and Treatment of Specific Learning Disorder
- 7.4 Let Us Sum Up
- 7.5 Key Words
- 7.6 Answers to Self Assessment Questions
- 7.7 Unit End Questions
- 7.8 References and Suggested Readings

7.1 LEARNING OBJECTIVES

After studying this Unit, you would be able to:

- Explain the clinical picture, causal factors, and treatment of Intellectual Disability; and
- Discuss the clinical presentation, causal factors, and treatment of and Specific Learning Disorder.

7.2 INTELLECTUAL DISABILITY: DEFINITION

Jagdish's mother contacted psychologists because he was being disruptive at school. Jagdish was 17 years old with Down's syndrome and was described as likable and at times, mischievous. Since childhood, Jagdish had undergone many tests of IQ functioning in the range of 40-50, which placed him in moderate intellectual disability. In school, Jagdish attended separate classrooms meant for children with special problems. Jagdish was placed in regular classes but was unable to proceed beyond class II, after which his teachers placed him in special classes. Jagdish has been cheerful and pleasant for his teachers and has made many friends in his class. He is very social and participates in all school activities that involve music and dance. However, lately his teachers complained to his parents that he was

* Adapted by Prof. Swati Patra, Discipline of Psychology, SOSS, IGNOU from Units 13 of BPCC 133 (BAG programme, IGNOU) written by Dr. Itisha Nagar, Assistant Professor of Psychology, Kamala Nehru College, University of Delhi, New Delhi.

being difficult and oppositional. When Jagdish's mother was interviewed, she expressed frustration at the classes because he was asked to do boring and repetitive tasks like folding paper. Jagdish felt frustrated too, because he was "being treated like a baby". Whenever Jagdish thought that he was being given work too easy for him, he would respond by being disruptive and naughty. However, his behaviour was interpreted by the teacher as communicating that the work was too hard for him and responded by giving even simpler tasks, after which Jagdish protested and resisted more vigorously.

Compared to any other mental disorder people with intellectual disability have received most of the devaluing, stigma, bullying, and shameful treatment from lay people and medical professions. The medical terms used to classify different levels of intellectual ability were turned into pejoratives over the ages, namely, idiot, moron, and imbecile. Similarly, the term used for intellectual disability used in DSM IV was mental retardation ("retarded") that also turned into an abuse.

Intellectual disability also known as intellectual developmental disorder is defined as sub-average functioning in general mental abilities such as reasoning, problem solving, planning, abstract-thinking, judgment, academic learning, and learning from experience beginning before the age of 18 years, and who have deficits in adaptive functioning.

Thus the definition has three main aspects:

- Sub-average intellectual ability, that is, they score significantly lower than average intelligence. Thus they have an IQ of 70 and below.
- Deficits in adaptive behavior or daily living skills such as brushing teeth, bathing, combing, etc. They lack in personal and social skills required to function effectively in our daily life activities.
- Occurs within the developmental period, that is, before 18 years of age.

The above definition of intellectual disability covers deficits in intelligence as well as problems with daily performance. The age criterion is important as it distinguishes between individuals who have had intellectual impairments throughout their developmental stage and those who acquired intellectual functioning impairment after maturity. The latter category of individuals is diagnosed with dementia rather than intellectual disability.

The causal factors for intellectual disability range from biological, psychosocial, socio-cultural or a combination of the three.

About, 1-3% of general population falls into the category of Intellectual disability with approximately 90% of these individuals are assessed to be at mild intellectual disability. People with mild intellectual impairments can, with proper preparation carry out most of the day-to-day activities. Many can learn to use mass transportation, purchase groceries, and hold a variety of jobs. Whereas those with more severe impairments may need help to eat, bathe, and dress themselves although with proper training and support they can achieve independence. Difficulties for both mild and severe cases affect many areas of functioning. For example, communication in mild cases may

lead to difficulties with articulation and expression of thought. By contrast, people with more severe problems may never learn to use speech as a form of communication and may require sign language.

Cognitive processes are adversely affected in people with intellectual disability, making learning a challenge. However, the level of challenge depends on how extensive the cognitive disability is. Unlike in DSM IV, the severity levels in DSM-5 (mild, moderate, severe, and profound) are determined on the basis of adaptive functioning and not on Intelligence Quotient (IQ) scores. This is because adaptive functioning and not IQ scores, is necessary to determine level of support necessary to maintain an acceptable condition of life. IQ scores are not overemphasized and functioning levels are considered as important.

The three domains of adaptive functioning have been identified: conceptual, social and perceptual domain. The assessment of intelligence across three domains (conceptual, social, and practical) ensures that clinicians base their diagnosis on the impact of the deficit in general mental abilities on functioning needed for everyday life. With early diagnosis, parental assistance and special educational programs people with intellectual disabilities are able to achieve significant degrees of functionality.

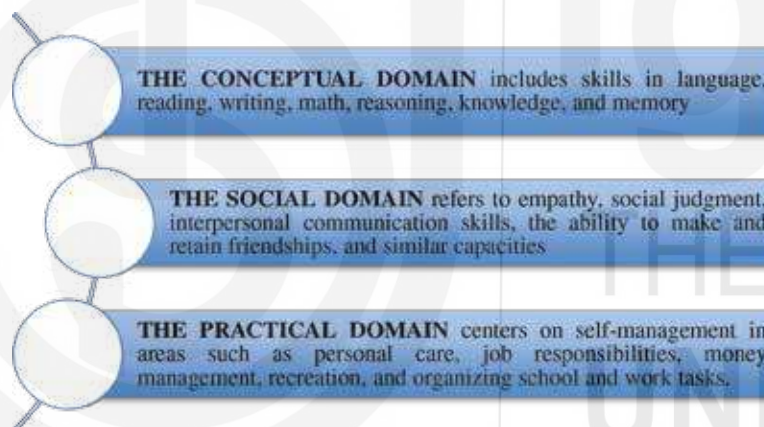


Fig. 7.1 Domains of Adaptive Functioning in DSM-5

Box 7.1 DSM-5 Criteria for Intellectual Disability (APA, 2013)

- A. Deficit of intellectual functions, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning or learning from experience, and confirmed by both individual clinical assessment and standardized intelligence testing.
- B. Deficits in adaptive functioning that failure to meet developmental and socio-cultural standards for personal independence and social responsibility.

Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work and community.
- C. Onset of intellectual and adaptive deficits during the developmental period.

7.2.1 Clinical Picture in Intellectual Disability

The DSM-5 criteria classifies severity of intellectual disability on the basis of daily-life skills. The categories or the subtypes of intellectual disability are as follows:

1. **Mild Intellectual Disability.** Largest number of people diagnosed with intellectual disability are those with mild intellectual disability. These individuals are considered to be educable (third-sixth grade), their intellectual levels as adults are comparable to average 8-11 year olds.

Socially they are considered to be that of adolescents, although they lack the imagination, inventiveness, and judgment of a typical teenager. Most cases of individuals with intellectual disability do not show any sign of brain pathology or physical anomalies. These individuals may require some intermittent and limited supervision, because of their limited ability to foresee the consequences of their action. As adults, they can marry, have children, but may need significant help during episodes of distress. Early diagnosis, parental assistance, special educational programs can help these individuals achieve simple academic and occupational skills and become self-supporting citizens.

2. **Moderate Intellectual Disability.** Individuals with moderate intellectual ability usually attain intellectual levels of 4-7-year olds, and fall into 'educable' and 'trainable' category. They may be able to read and write a little and manage to communicate verbally but their rate of learning and level of conceptualization is very limited (first-second grade). They are presumed to be able to achieve partial independent in daily self-care, acceptable behaviour, hold a job in a sheltered environment.
3. **Severe Intellectual Disability.** Sensory defects, motor disability and speech development are severely affected in these individuals. There is limited level of personal hygiene and self-help skills, which somehow lessen their dependency, but they are always dependent on others for care. Some individuals may gain to certain extent from training and can perform simple occupational tasks under supervision.
4. **Profound Intellectual Disability.** Such individuals are severely deficient in adaptive behaviour and unable to master even simple tasks like buttoning, using spoon to eat, toilet training, bathing etc. In some individuals, speech may not develop or may be rudimentary. Generally related to organic brain damage resulting from physical abnormalities, central nervous system pathologies, seizures etc. and can be diagnosed in infancy. The individuals require constant support and custodial care throughout their lives. They usually have poor health and low resistance to diseases, thus having short life expectancy.

7.2.2 Causal Factors of Intellectual Disability

The causes of intellectual disability can be classified into two groups.

First, biological basis i.e. intellectual ability caused by some known brain pathology or organic impairments. In these cases, the level of functioning is almost always at least moderate. Profound intellectual disability, although rarer is also related to organic pathology. *Second*, cultural-familial basis of intellectual disability, about 75% of cases with intellectual disability, usually with mild intellectual disability are thought to be a result of social and environmental influences. Environmental factors like child abuse, neglect and socio-emotional deprivation combine with biological influences to cause intellectual disability.

Genetic Factors

Intellectual disability (especially mild intellectual disability) tends to run in families; about 300 genes have been identified as having the potential to contribute to intellectual disability. However, it is also important to note that poverty and socio-cultural deprivation that may contribute to impaired brain development also tends to run in families. Genetic aberrations may lead to metabolic alterations that negatively affect the brain's development. Mild intellectual disability is usually attributed to multiple genes, whereas severe and profound intellectual disability is likely to be associated with identifiable single gene disorders. Dominant gene disorder (only one gene is needed for its expression) includes conditions such as tuberous sclerosis. About 60% of people in tuberous sclerosis have intellectual disability along with seizures and characteristic bumps on skin. Recessive gene disorder (expresses itself only when paired with another copy of itself) such as phenylketonuria (PKU) in which the child has an inability to breakdown the protein phenylalanine found in food. If detected early, intellectual disability can be prevented through special diet. Finally, X-linked gene (present on X chromosome) conditions such as fragile X syndrome primarily affects males and causes moderate-severe intellectual disability and autism like symptoms.

Infections, Toxic Agents and Radiation

Intellectual disability is associated with wide range of infections and toxic agents, such as exposure to HIV, German measles, carbon monoxide, and overdose of any toxicity. Excessive alcohol intake during pregnancy leads to a condition like foetal alcohol syndrome. RH incompatibility between parents has also been associated with intellectual disability in the child. In a medical study, it was found that the deadly gas leaked from a Bhopal pesticide plant (Bhopal gas tragedy, 3 December, 1984) is continuing to effect third generation of victims. About 2500 children were identified with birth defect and about 164 of them were assessed to have intellectual disability. Additionally, exposure to radiation may lead to mutations, which is why pregnant women are not allowed in X ray rooms in hospitals. For example, studies on 1600 children who were irradiated while they were in their mother's womb during the atomic bomb explosions in Hiroshima and Nagasaki (Japanese cities that were bombed during World War II, 1945) revealed that 30 of them suffered clinically severe intellectual disability.

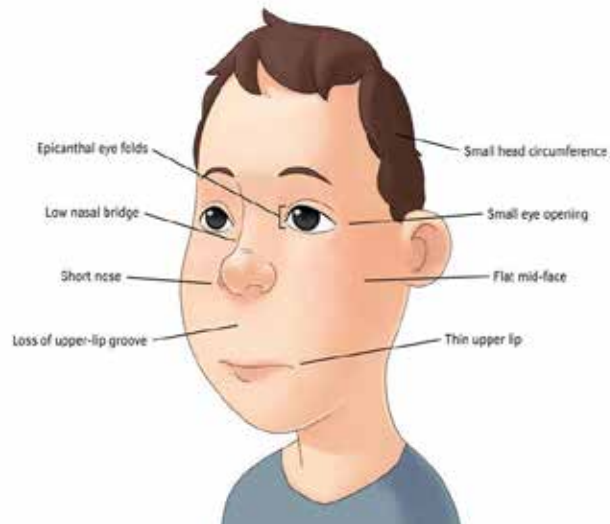


Fig. 7.2 Foetal Alcohol Syndrome

Image Source: <https://healthand.com/in/topic/general-report/fetal-alcohol-syndrome>

Trauma/Physical Injury

Physical injury at birth for instance because of forceps delivery, difficulties in labour due to malposition of the foetus, lack of sufficient oxygen during birth from delayed breathing, and bleeding within the brain may be caused due to the physical trauma are associated with intellectual disability.

Malnutrition

Unhealthy and unbalanced diet (devoid of protein and other essential nutrients) during early development of foetus does irreversible physical and mental damage. In many villages in India because of poverty and lack of education many pregnant women do not get healthy and nutritional diet. Malnutrition continues to plague many children below the age of five years in India often leading to their death or poor physical and mental development.

Organic Retardation Syndromes

Intellectual disability stemming primarily from biological causes can be classified into several recognizable clinical types such as Phenylketonuria (PKU), Down's syndrome, and conditions involving cranial abnormalities. Down's syndrome (trisomy 21) is a condition in which an individual has extra 21st pair of chromosomes. These individuals have recognizable facial features. Nearly all adults with Down's syndrome past the age of 40 show signs of dementia of the Alzheimer's type. It is possible to detect Down's syndrome in utero and had led to the ethical question of whether it is advisable to abort foetus detected with Down's syndrome or not. A mother writes on the matter,

"If we deny someone the chance to be born because we've decided they won't meet a predetermined measure of status or achievement, then we fail to grasp what it is to be human".

Cranial abnormalities like macrocephaly (large headedness), microcephaly (small headedness), and hydrocephaly (accumulation of abnormal amount of cerebrospinal fluid) are conditions associated with intellectual disability amongst other problems.

7.2.3 Management for Intellectual Disability

A number of *special education and rehabilitative programs* have been developed to improve the adaptability and functionality of individuals with intellectual disability. Institutionalization of people with intellectual disability depends on the quality of care and services provided by the institution. Education and training facilities for individuals with intellectual disability are extremely inadequate. Educational and training programs can help in improvement of skills such as personal grooming, social behavior, basic academic skills, and simple occupational skills. Behavioural principles such as breaking a complex task into smaller sub-components can help individuals learn at their pace and experience success. Vocational training for those with mild intellectual disability can help individuals become independent and productive community members. Whereas, special education classes for those with moderate and severe intellectual disability emphasize on the development of self-care and other skills, e.g., toilet training. Mainstreaming or inclusion programs, regular schooling of children with mild intellectual disability requires careful planning, a high level of teacher skill, and facilitative teacher attitudes.

In general, *institutionalization* is sought for two types of people with intellectual disability, those with profound disability and institutionalization is sought in childhood itself. And second for those with mild intellectual disability where institutionalization is sought in adolescence because of delinquency and other problematic behaviours such as, aggression. In general, long term institutionalization is related to behavioural and emotional problems. In many cases in India, institutionalization may be very expensive for many families. It is not uncommon to find children and individuals with intellectual disability to receive almost no care/support by family or society.

Self Assessment Questions 1

1. The DSM-5 criteria classifies the severity of _____ on the basis of daily-life skills.
2. The categories of intellectual disability are, _____, _____, _____, and _____.
3. Intellectual disability occurs before _____ years of age.
4. Which two subtypes of intellectual disability are considered as educable?
5. Which intellectual disability requires custodial care?
6. What are the different domains of adaptive functioning in the diagnosis of intellectual disability?

7.3 SPECIFIC LEARNING DISORDER

Children first learn oral language and then learn to read and write that language. Written language is a code that stands for oral language whereas reading is the ability to construct meaning (comprehension) from the printed language. Academic success of a child depends great deal on reading, writing, spelling and comprehension. While most children are able

to recognize or decode in print the language and use printed language for the language they use orally, people with specific learning disability have significant deficits in reading, written expression and/or mathematics.

Specific learning disorder refers to clear impairment in school performance or (if the person is not a student) in daily living activities—which is not due to intellectual disability or to another developmental disorder such as autism or attention deficit and hyperactivity. Further, DSM-5 distinguishes learning disorder from learning problems that are primarily a result of visual, hearing and motor disabilities, emotional disturbances, environmental, cultural or socioeconomic disadvantage. DSM-5 combines the previous DSM IV diagnoses of poor achievement in reading (**dyslexia**), writing (**dysgraphia**), arithmetic (**dyscalculia**) and learning disorder not otherwise specified into a single diagnosis of Specific Learning Disorder. Learning disorders in reading, writing, and/or mathematics are designated as specifiers.

Prevalence rate for specific learning disorder varies from one study to another. One study has estimated that about 5-10% children may have specific learning disorder. Out of the three, dyslexia is the most common whereas, dyscalculia is the least common. Significantly there are more boys than girls diagnosed with specific learning disorder, although more recent researches suggest that boys and girls may be equally affected by this condition.

7.3.1 Clinical Picture in Specific Learning Disorder

Children with *dyslexia* have poor phoneme awareness, i.e. they have difficulty in knowing how to sound out alphabets. A child may achieve phoneme awareness but may lack word decoding ability, they may not be able to read words on a page. Child lacks fluency and may get stuck when trying to read, reading speed is slow, may make guesses at words based on the first letter and may find the entire exercise to be extremely exhausting and may begin to avoid reading altogether. In *dysgraphia*, child may have very poor and almost illegible writing, wrong spellings for even simple words, and lack organization of ideas and thoughts. *Dyscalculia* can cause difficulties in learning math concepts such as quantity, place value, and time, difficulty memorizing mathematical facts, difficulty in organizing numbers etc.

Despite being recognized as a distinct neurodevelopmental disorder, learning disorders are poorly understood by teachers, parents, and school administration. Blaming of victim and attributing the problems to the child's character ("you're lazy, you're useless, you are stupid") and lack of motivation is common. Conventional schooling and parenting can be detrimental for the self-esteem of a child with learning disorders. It is not uncommon for parents to receive a diagnosis late, by the time the child's self-esteem and psychological well-being has already been compromised though internalization of negative comments, brickbats and criticisms received. Many well-known and famous people like Abhishek Bachchan, Winston Churchill, Tom Cruise, Leonardo da Vinci, Walt Disney, and Jim Carrey are said to have dyslexia. Early intervention, high intelligence, talent and motivation can help children overcome their disability through achievements in many fields.

Box 7.2 Some Common Indicators of Specific Learning Disorder

Dyslexia

- Poor Phonemic Awareness: i.e. lack of awareness of sound of alphabets
- Poor phoneme-grapheme connection: sound-symbol correspondence
- Making of errors while reading
 - Omit words: cat for can't, wet for went, sig for sing.
 - Reversals: read 17 for 71, won for now, saw for was.
 - Sequencing: reading name as amen, reserve as reverse.
 - Misreads simple words: a for and, from for for, then for there.
- Problems with fluency/slow reading: their reading is painfully slow and halting. Reading lacks fluency.

Dysgraphia

- Generally illegible writing: writing may resemble scribbles/noodles.
- Spelling Mistakes: Poor phoneme-grapheme connection
- Mix of upper/lower case letters or cursive/print letters.
- Irregular letter shape and sizes

Dyscalculia

- Problems with adding, subtracting, multiplication.
- Confused by similar looking Arithmetic signs such as + and x; < and > ; - and ÷
- Understand what adding means yet may become confused when asked to add.
- Reverse numbers like 18 and 81, or transpose numbers like 752 becomes 572
- Problems with telling time

Box 7.3 DSM-5 Diagnostic Criteria for Specific Learning Disorder (APA, 2013)

- A. Difficulties learning and using academic skills, as indicated by the presence of at least one of the following symptoms that have persisted for at least 6 months, despite the provision of interventions that target those difficulties:
1. Inaccurate or slow and effortful word reading (e.g., reads single words aloud incorrectly or slowly and hesitantly, frequently guesses words, has difficulty sounding out words).
 2. Difficulty understanding the meaning of what is read (e.g., may read text accurately but not understand the sequence, relationships, inferences, or deeper meanings of what is read).
 3. Difficulties with spelling (e.g., may add, omit, or substitute vowels or consonants).

4. Difficulties with written expression (e.g., makes multiple grammatical or punctuation errors within sentences; employs poor paragraph organization; written expression of ideas lacks clarity).
 5. Difficulties mastering number sense, number facts, or calculation (e.g., has poor understanding of numbers, their magnitude, and relationships; counts on fingers to add single-digit numbers instead of recalling the math fact as peers do; gets lost in the midst of arithmetic computation and may switch procedures).
 6. Difficulties with mathematical reasoning (e.g., has severe difficulty applying mathematical concepts, facts, or procedures to solve quantitative problems)
- A. The affected academic skills are substantially and quantifiably below those expected for the individual's chronological age, and cause significant interference with academic or occupational performance, or with activities of daily living, as confirmed by individually administered standardized achievement measures and comprehensive clinical assessment. For individuals age 17 years and older, a documented history of impairing learning difficulties may be substituted for the standardized assessment.
 - B. The learning difficulties begin during school-age years but may not become fully manifest until the demands for those affected academic skills exceed the individual's limited capacities (e.g., as in timed tests, reading or writing lengthy complex reports for a tight deadline, excessively heavy academic loads).
 - C. The learning difficulties are not better accounted for by intellectual disabilities, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate educational instruction.

7.3.2 Causal Factors and Treatment of Specific Learning Disorder

Most commonly held view of the causes of Specific Learning Disorder is that it is caused by subtle central nervous system impairments. Like other neurodevelopmental disorder, learning disorders also have a heritable component. Studies have found that people in dyslexia have reduced activation of left hemisphere. In particular, three areas of left hemisphere: Broca's area (word recognition), left parieto-temporal area (affects word analysis), and left occipito-temporal area (recognizing word form) have been found to have reduced activation in children with dyslexia when given a phonological awareness task. Further, intervention for reading disability, led to greater activation of these areas in children than those who received less intensive treatment.

Many treatment programs have been developed for people with learning disorders, including one-one-one tutoring and school group programs. Early intervention programs involve imparting of skills such as reading out loud under close supervision, teaching phonemic awareness through creative

methods, readiness skills, such as letter discrimination, phonetic analysis, and learning letter–sound correspondences, have been incorporated. Programs have also been designed to ensure that children experience success that helps boost the self-confidence of children and makes learning interesting. However, while many single case studies have claimed success in treatment of learning disorders, interventions based on direct instruction strategies for learning have had limited success. Some successful strategies include use of computer assisted tools like podcast/webcast lectures, tutors, untimed/oral tests and allowing another individual to write answers that they can dictate out in examinations. Central Board of Senior Secondary Education (CBSE) in India for instance mandates schools to give special provisions for children with learning disorders as well as autism.

Self Assessment Questions 2

1. Areas in the _____ hemisphere have been implicated in specific learning disorders.
2. Dysgraphia refers to poor achievement in _____.
3. Lacking in word decoding ability is one of the features in _____.
4. Problems with adding, subtracting, multiplication is referred to as _____.
5. The learning difficulties in specific learning disorder are due to intellectual disability. True / False.

7.4 LET US SUM UP

In the present Unit, you learned about two more developmental disabilities such as Intellectual disability and Specific Learning Disorder. In the previous Unit, you have already learned about Autism spectrum disorder and Attention deficit hyperactivity disorder. Intellectual developmental disorder is defined as sub-average intellectual functioning in general mental abilities such as reasoning, problem solving, planning, abstract-thinking, judgment, academic learning, and learning from experience beginning before the age of 18 years. Special education and rehabilitation programmes as well as institutionalization are being used for intellectually disability depending upon the functionality of the individual. While most children are able to recognize or decode in print the language and use printed language for the language they use orally, people with specific learning disability have significant deficits in reading, written expression and/or mathematics. Early intervention programs that includes one-to-one tutoring and school-based programmes have been found to be successful for learning disability.

7.5 KEY WORDS

Intellectual Disability. It is also known as intellectual developmental disorder and is defined as sub-average intellectual functioning with deficits in adaptive behaviour, and beginning before the age of 18 years.

Dyslexia. Significantly poor achievement in reading relative to one's developmental level which is not due to intellectual disability, another

developmental disorder such as autism or attention deficit and hyperactivity, primarily a result of visual, hearing and motor disabilities, emotional disturbances, environmental, cultural or socioeconomic disadvantage.

Dysgraphia. Significantly poor achievement in writing relative to one's developmental level which is not due to intellectual disability, another developmental disorder such as autism or attention deficit and hyperactivity, primarily a result of visual, hearing and motor disabilities, emotional disturbances, environmental, cultural or socioeconomic disadvantage.

Dyscalculia. Significantly poor achievement in mathematics relative to one's developmental level which is not due to intellectual disability, another developmental disorder such as autism or attention deficit and hyperactivity, primarily a result of visual, hearing and motor disabilities, emotional disturbances, environmental, cultural or socioeconomic disadvantage.

7.6 ANSWERS TO SELF ASSESSMENT QUESTIONS

Answers to Self Assessment Questions 1

1. Intellectual disability
2. Mild intellectual disability, moderate intellectual disability, severe intellectual disability, and profound intellectual disability.
3. 18 years
4. Mild and Moderate intellectual disability
5. Profound
6. Conceptual, social, and practical

Answers to Self Assessment Questions 2

1. Left
2. Writing
3. Dyslexia
4. Dyscalculia
5. False

7.7 UNIT END QUESTIONS

1. Explain the causes and treatment of intellectual disability.
2. Discuss the clinical features of intellectual disability.
3. Elucidate the diagnostic criteria of specific learning disability. Discuss its treatment.

7.8 REFERENCES AND SUGGESTED READINGS

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