

## **UNIT - III**

### **Different Learners in Inclusive Education**

Types of learning disability: - physical- visual impaired, hearing impaired, Orthopaedic -Mentally impaired - Learning disability - Dyslexia, Dyscalculia, Dysgraphia- Attention deficit hyperactive disorder(ADHD) - Autism - Cerebral palsy.

#### **Introduction**

Learning disabilities are neurologically-based processing problems. These processing problems can interfere with learning basic skills such as reading, writing and/or math. They can also interfere with higher level skills such as organization, time planning, abstract reasoning, long or short term memory and attention. It is important to realize that learning disabilities can affect an individual's life beyond academics and can impact relationships with family, friends and in the workplace.

Since difficulties with reading, writing and/or math are recognizable problems during the school years, the signs and symptoms of learning disabilities are most often diagnosed during that time. However, some individuals do not receive an evaluation until they are in post-secondary education or adults in the workforce. Other individuals with learning disabilities may never receive an evaluation and go through life, never knowing why they have difficulties with academics and why they may be having problems in their jobs or in relationships with family and friends.

Learning disabilities should not be confused with learning problems which are primarily the result of visual, hearing, or motor handicaps; of intellectual disability; of emotional disturbance; or of environmental, cultural or economic disadvantages.

Generally speaking, people with learning disabilities are of average or above average intelligence. There often appears to be a gap between the individual's potential and actual achievement. This is why learning disabilities are referred to as "hidden disabilities": the person looks perfectly "normal" and seems to be a very

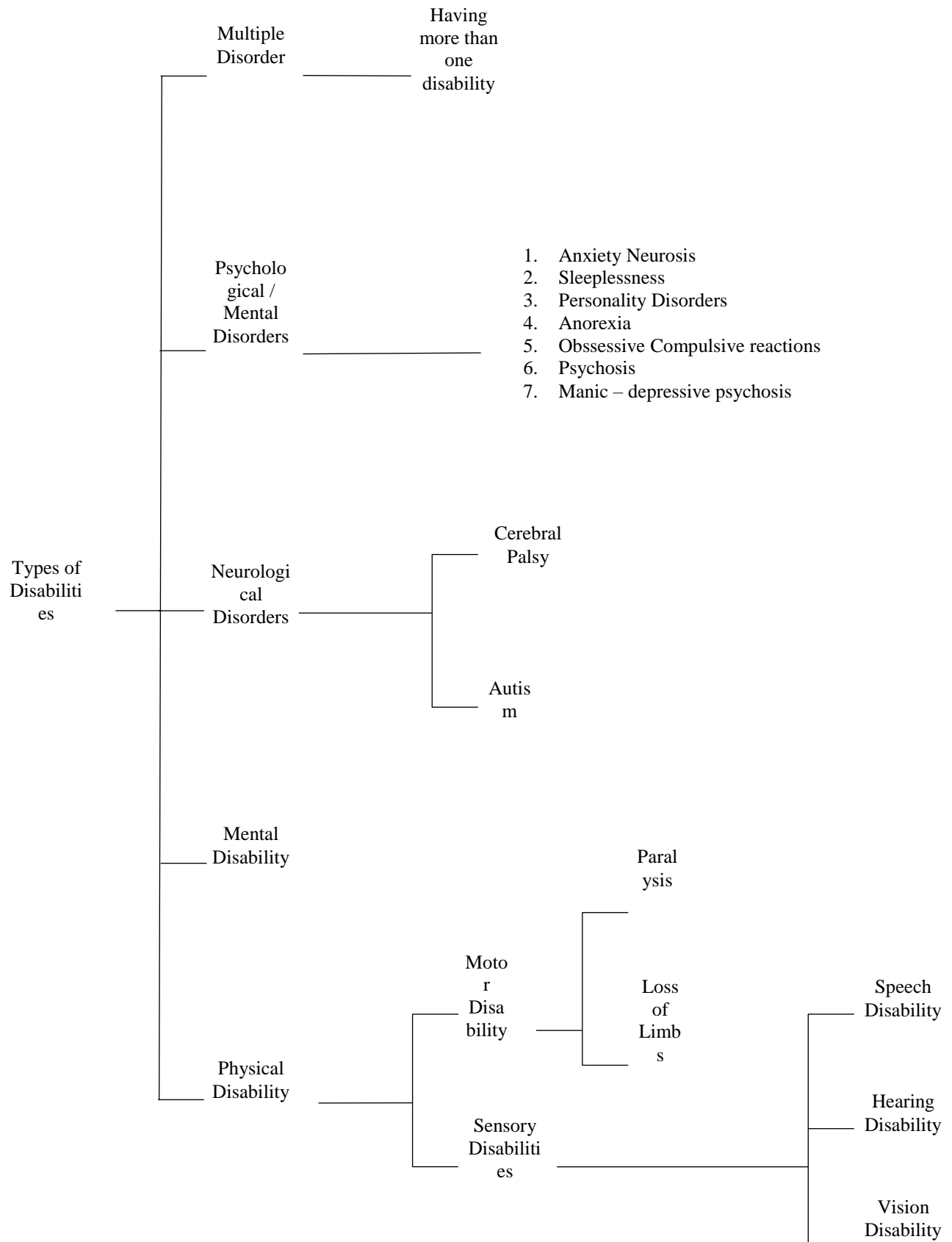
bright and intelligent person, yet may be unable to demonstrate the skill level expected from someone of a similar age.

A learning disability cannot be cured or fixed; it is a lifelong challenge. However, with appropriate support and intervention, people with learning disabilities can achieve success in school, at work, in relationships, and in the community.

In Federal law, under the Individuals with Disabilities Education Act (IDEA), the term is "specific learning disability," one of 13 categories of disability under that law.

"Learning Disabilities" is an "umbrella" term describing a number of other, more specific learning disabilities, such as dyslexia and dysgraphia. Find the signs and symptoms of each, plus strategies to help below.

## Types of Disability:



## **MODELS OF DISABILITY**

Corresponding to the evolution of the philosophy of inclusion can be drawn the evolution of models of disability. A radical rethinking on policy and practice can be seen to have resulted in the contemporary philosophy of inclusion and that it reflects a fundamentally different way of thinking about the roots of difficulties encountered by a person with disability: a shift from a defect within- the-child model based on the assumption that the origins of learning difficulties is largely within the child, to a thinking that it is the societal system that are discriminatory and disabling, demanding attention to the alleviation of obstacles to the participation of disabled people in all the events and developments of the society. Let us examine these models of disability.

### **Charity Model**

Driven largely by emotive appeals of charity, this model sees Persons with Disabilities (PwDs) as helpless people needing 'care' and 'protection'. This model relies largely on the goodwill of benevolent humanitarians for 'custodial care' of the PwDs rather than justice and equality.

### **Medical Model**

The medical model of disability views disability as a 'problem' that belongs to the disabled individual and is based on the view that disability is caused by disease or trauma and its resolution or solution is intervention provided and controlled by professionals.

### **Rehabilitation Model**

The traditional rehabilitation model is based on the medical model and the belief that disability is a challenge which can be overcome with adequate effort on the part of the person. PwDs are often perceived as having failed if they do not overcome the disability. Like the medical model, the rehabilitation model perceives care and support as determined by professionals.

## **The Social Model**

The social model of disability views disability as socially constructed and a consequence of society's lack of awareness and concern about persons who require specific modifications in their environment to live full, productive lives. The model, referred to by some as the barriers model, views the medical diagnosis, illness or injury as having no part in disability. The social model of disability, in the example presented above, in the context of the student using wheel chair in a building with no ramps, would see the steps or the environmental factors as the barrier disabling the student.

### **Reasons for Learning Disability:**

The causes for learning disabilities are not well understood, and sometimes there is no apparent cause for a learning disability. However, some cause of neurological impairments include:

- i) **Heredity:** Learning disabilities often run in the family. Children with learning disabilities are likely to have parents or other relatives with similar difficulties.
- ii) **Problem during pregnancy and birth:** Learning disabilities can result from anomalies in the developing brain, illness or injury, fetal exposure to alcohol or drugs, low birth weight, oxygen deprivation, or by premature or prolonged labour.
- iii) **Accidents after birth:** Learning disabilities can also be caused by head injuries, malnutrition, or by toxic exposure (such as heavy metals or pesticides).

### **Physical - Visual Impaired:**

#### **Physical Disability**

Physical disabilities may affect, either temporarily or permanently, a person's physical capacity and/or mobility. Whilst there are tests available for some physical

disabilities, they are often diagnosed through observations of a person's development, behaviour, and physical capabilities.

There are many different causes of physical disabilities but they can include inherited or genetic disorders, serious illnesses, and injury.

Many causes and conditions can impair mobility and movement. The inability to use legs, arms, or the body trunk effectively because of paralysis, stiffness, pain, or other impairments is common. It may be the result of birth defects, disease, age, or accidents. These disabilities may change from day to day. They may also contribute to other disabilities such as impaired speech, memory loss, short stature, and hearing loss. People with mobility and movement impairments may find it difficult to participate when facing social and physical barriers. Quite often they are individuals of courage and independence who have a desire to contribute to the fullest level of their ability. Some are totally independent, while others may need part- or full-time assistance.

A physical disability is any condition that permanently prevents normal body movement and/or control. The term physical disabilities is broad and covers a range of disabilities and health issues, including both congenital and acquired disabilities. Students with congenital conditions either are born with physical difficulties or develop them soon after birth. Acquired disabilities are those developed through injury or disease while the child is developing normally. The age at which a condition develops often determines its impact on the child. Within that range are physical disabilities or impairments that interfere with a child's ability to attain the same developmental milestones as his or her age-mates. This section focus on the visual, hearing, loco-motor and neurological challenges of children.

## **VISUALLY IMPAIRED CHILDREN**

## **Concept**

Visual impairment can take many forms and each condition will be quite specific. Therefore the impact that visual impairment has on learning will be unique to the individual. The vast majority of people with visual impairment have some useful sight although the degree of sight can vary greatly. For the many learners with a visual impairment reading and writing presents barriers to learning. Often creating difficulties with literacy and numeric. This can inevitably result in difficulties in accessing and engaging in the curriculum.

## **Characteristics:**

- Remember what they see rather than what they hear
- Remember diagrams and pictures
- Prefer to read and write rather than listen.
- Have trouble remembering verbal instructions
- Need an overall view and purpose before beginning a project
- Like art more than music

## **CLASSIFICATION**

### **Visually handicapped;**

The total group of children who require special educational provisions because of visual problems

### **Blind:**

Having either no vision or almost, light perception (the ability to tell light from dark) but no light projection (the ability to identify the direction from which light comes)

### **Low vision:**

Limited distance vision but some useful near vision at a range of several feet function ;varies with light , task and personal characteristics, adjustments are possibly necessary in lighting, size of print or objects and distance.

## **IDENTIFICATION OF VISUALLY IMPAIRED CHILDREN**

### **Clinical assessment**

- The Snellen Chart (developed by Hermann Snellen a Dutch Ophthalmologist) is the most common visual screening test.
- It consists of eight rows of letters ranging from large to small or Es (for those who are illiterate or very young)
- At the time of eye examination, the child is made to sit/stand twenty feet away from the chart and is asked to read the letters with each eye
- Assessment is based on how accurately the child identifies the letters ( or directions of the Es). The serious limitation of Snellen chart lies in the fact that it can be used to screen for distance vision problems only

## **CAUSES OF VISUAL IMPAIRMENT OR DISABILITY**

1. The transfer of genes and chromosomes associated with visual impairment to children from their parents at the time of conception
2. The carelessness adopted by the pregnant mothers in their diets, mal-nutrition , use of strong drugs, being affected from chronic diseases and affected with serious accidents and incidents, the abnormal and stressful psyche states, unhealthy living etc.
3. The diseases of the eye and infection
4. The deficiency of the vitamins and other nutrition components, essential for maintaining health and well-being of the eyes.
5. The evil effects of fatal diseases like cancer, growth of tumors , skin diseases like cancer, growth of tumors , skin diseases, typhoid , malaria, etc.



## **Functional vision assessment**

### **Assessment based on the visual performance**

1. How well does the child perform on distant vision tasks and near vision tasks?
2. How well does the child perform in terms of colour vision?
3. What is overall wrong with the child in terms of his visual ability and progress?
4. How well does the child perform in terms of travel skills?

### **Assessment based on behavioural symptoms:**

1. Does the child rub his eyes excessively?
2. Does the child hold book close to the eyes or too far from his eyes?
3. Does the child unable to see distant objects?
4. Does the child lose place frequently when reading?
5. Does the child feel difficulty in reading or doing tasks which are close to the eyes?

### **Assessment based on the appearance symptoms:**

- a. Does the child one eye higher in relation to the other?
- b. Does the child have crossed eyes
- c. Does the child eyes looks abnormal
- d. Is there swelling in the eyelids of the child?
- e. Are the eyes of the child unable to move smooth in all directions of gaze?

## **HEARING IMPAIRMENTS**

### **CONCEPT:**

**Aural or auditory impairment include those who are hard of hearing and those who are deaf**

The hard of hearing are those in whom the sense of hearing, although defective, is functional with or without a hearing aid. They have in most cases

acquired useful speech and the ability to understand speech prior to their hearing loss, and who have continued to use these skills. The deaf are those in whom the sense of hearing is non-functional for the ordinary purposes of life. The deaf are then subdivided into the congenitally deaf - those whose hearing is non-functional from birth, and the adventitiously deaf those who were born with normal hearing, but whose hearing became non-functional through accident or disease

### **CHARACTERISTICS OF HEARING IMPAIRED CHILDREN**

1. The ability to learn language and speech is affected the development of hearing impaired( the attitude that deafness automatically leads to an inability to speak is not scientifically based
2. Without wide training these children will not develop normal language
3. There are cases of children with hearing losses as great as 70 to 90 dB in the better ear who have nevertheless developed excellent speech
4. They are socially handicapped ( not well adjusted with the society)
5. Problems in personal and social development (language becomes a barrier for them for communication with other children .This affects the socialization process
6. Personality problems(partial hearing difficulty may create more confrontation (conflict) than in totally deaf children
7. Psychological characteristics (children develop senses of inferiority since they find themselves helpless in adapting to circumstances that require verbal communication. They always compare with normal children)
8. Linguistic difficulties (acquisition of language is very difficult for deaf children, they are abnormally slow in its linguistic development. The children have to receive visually what other children receive orally
9. Spelling faulty articulation

10. Apparent backwardness in school despite adequate tested intelligence
11. Like art than music
12. Marked delay in starting age for speak
13. Frequent failure to respond where spoken to

### **CLASSIFICATION OF HEARING IMPAIRED CHILDREN IN THE BASIS OF THEIR HEARING LEVEL**

HEARING LEVEL OF THE CHILD	LABELLING OF THE CHILD
27 - 39 dB	Slightly hard of hearing
40 - 54 dB	Mildly hard of hearing
55 - 70 dB	Hard of hearing
71 - 89 dB	Severely hard f hearing
90 dB and above	Deaf

### **IDENTIFICATION OF HEARING IMPAIRED CHILDREN**

1. Neuro psychological test
2. Medical examination of the children
3. Case study of the child
4. Systematic observation of the child behavior
  - a. They turn heads on one side to hear better
  - b. These children are unable to follow directions
5. In the classroom they always request to repeat instruction question etc.
6. They focus specially on the speaker's lips
7. They always hesitate to participate in group discussions

8. They display restlessness, inattention and speech difficulty
9. Pure - tone audiometry ( it is testing procedure for the formal assessment of the hearing losses with the help of an instrument known as audio meter. It can be employed for the children about 3 years of age and older.)
10. Speech audiometry (to assess the hearing impairments in which we try to test an individual's ability to detect and understand speech.

### **MAIN SYMPTOMS**

**The following questions can be put to the children for identification**

1. Does the child ask for repetition of instruction?
2. Does the child display restlessness and inattention?
3. Does the child have an observable deformity of the ear?
4. Does the child have a discharge from the ear?
5. Complain of pain in the ear frequently
6. Does the child turns his head frequently in order to hear better?
7. Is the child unable to follow your instruction
8. Scratch his ear frequently
9. Focus on the speakers face while listening

If answers to four or five questions are marked 'yes' the teacher can suspects hearing impairments should be referred to the audiologist and ENT specialist for investigation

### **USE OF DEVELOPED TECHNOLOGCAL MEANS**

- a) Hearing aid
- b) Cochlear implants
- c) Assistive listening devices

- d) Alerting devices
- e) Television and film captioning
- f) Text telephones
- g) Computer technology

## **ORTHOPAEDIC IMPAIRMENT**

### **CONCEPT**

Orthopaedic impairments can dramatically affects quality of life, and even shorten the life span if left untreated. With impaired mobility, affected people may not be able to sit, walk or handle things on their own. Where orthopedic impairment is already established, physiotherapy, orthopedic surgery, and providing impaired persons with mobility aids (e.g. braces, walking splints, orthopaedic shoes, and wheelchairs) can greatly improve quality of life.

### **CHARACTERISTICS OF ORTHOPAEDIC IMPAIRED CHILDREN**

- Passive (inactive)
- Less persistent (constant)
- Display less motivation
- Dependent on adults
- Interact less with peers
- Poor body image
- High anxiety
- Frustration
- Quite
- Conforming (meeting the requirement)
- Tenderminded
- Their capacity for frustration tolerance are lower than normal children.

## **OSTEOMYELITIS**

### **CLASSIFICATION:**

It is a chronic bacterial bone and joint infection that progressively destroys the bone and may also affect the joints. When the bone is infected, pus is produced within the bone, resulting in a foul-smelling discharge. The condition often causes severe physical impairment if left untreated.

Risk factors for developing osteomyelitis, more common in developing countries, include malnutrition, poor hygiene, diabetes, poor circulation, extensive scarring, chronic wounds, walking barefoot on rough grounds (as that causes minor abrasions and allows bacteria to enter the body.) smoking, chronic oedema, an impaired immune system (e.g. through malnutrition and chronic malaria) and exposure to harmful bacteria.

## **POLIO PARALYSIS**

- This is a condition that causes paralysis of muscles without loss of sensation. Contractures

deform joints and interfere with the patient's ability to walk. The initial disease, polio (

short for poliomyelitis), is a viral disease that can damage the nerves in the spinal cord,

causing paralysis of the arms, legs, or trunk. Polio mainly affects children under the age of

three

- Polio is caused by a virus that enters the body through the mouth
- The polio virus lives in the throat and intestinal tract of infected persons

- It is usually contracted from hands or eating utensils contaminated with the stool of an infected person
- Initial polio attacks are preventable by immunization

### **TUBERCULOSIS OF THE SPINE**

- This is an infection of the spinal column. The disease progressively destroys the backbone and causes severe physical impairment and may lead to death if left untreated. Tuberculosis can be recognized by a sharp bend in the middle section of the backbone that goes along with shortening and thickening of the chest.
- This disease is caused by the tubercle bacillus. Pulmonary tuberculosis, an infection of the lungs, is the most common presentation.
- Tuberculosis of the spine occurs when a tubercular infection of the lungs spreads to the spinal bones. This frequently happens in children
- Risk factors include overcrowded and poor living conditions, malnutrition, and HIV infection
- The infection can be cured with anti-tuberculosis medicine but extensive surgery is often necessary to stabilize the spine, correct deformity and allow recovery of the spinal cord.

### **CAUSES OF ORTHOPAEDIC IMPAIRED CHILDREN**

#### ➤ **Heredity causes:**

Disturbance in the working of inherent **gene** mechanism

#### ➤ **Congenital causes:**

Congenital defects are those that are present at **birth**

- Common congenital defects include club foot dislocation of hip, missing bones, bow leg, webbed fingers etc.
- The defects are possible due to infection

- Nutritional deficiency, x-rays , glandular disorder of the mother maternal malnourishment etc.

- **Acquired causes:**

Acquired defects include birth injury, accidents, nutrition, accidents, nutrition deficiency, defective bones or joints, viral infection, etc.

## **IDENTIFICATION OF ORTHOPAEDIC IMPAIRED CHILDREN**

1. The student may be identified as having orthopedic impairment if
  - a) The student is diagnosed by a qualified medical practitioner as having an orthopedic impairment
  - b) The impairment is severe and
  - c) The impairment adversely affects the student's education performance
2. The term orthopedic impairment includes impairments caused by congenital abnormally (e.g. clubfoot, absence of some member, etc.) impairments caused by disease (e.g. poliomyelitis , bone tuberculosis, etc.) and impairments from other causes(e.g. cerebral palsy, amputations, and fractures or burns that cause contractures.)

## **MENTALLY RETARDED CHILDREN**

### **MEANING AND DEFINITION**

The name suggest from the retardation of the normal growth, development and functioning of their mental capacities. Actually retardation as a term is frequently used in the physics and engineering as antonym, to the term acceleration. Here acceleration stands for uniform increase in the velocity of a moving object and retardation for a gradual decrease.



The term 'mental retardation' or 'mental deficiency' has been defined in several ways. Some definitions of mental retardation are:

**Page (1976):** Mental deficiency is a condition of subnormal mental development, present at birth or early childhood and characterized mainly by limited intelligence and social inadequacy

**Rosen, Fox and Gregory (1972):** Mental retardation refers to a chronic condition present from birth or early childhood which is characterized by both impaired intellectual functioning as measured by standardized tests and impaired adaptation to the daily demands or the individual's social environment.

**British Mental Deficiency Act (1981):** Mental retardation is a condition of arrested or incomplete development of mind existing before the age of 18 years whether arising from inherent causes or included by disease or injury

## **CHARACTERISTICS OF MENTALLY RETARDED CHILDREN**

### **PHYSICAL CHARACTERISTICS**

1. Physical features, somatic development, motor abilities, etc.
2. The circumference of their head is comparatively less than the normal children especially children diagnosed with microcephally.
3. Many of them (especially suffering from down's syndrome ) may have thick fingers or club fingers and toes, short and stout in stature and may usually have moon-shaped eyes, short nose, open mouth and fissures in the tongue, etc.
4. A few children diagnosed as suffering from hydrocephalis ,may have large head filled with liquid
5. Many of them may show marked physical abnormalities such as lips fairly apart with tongue visible in between the teeth and saliva coming out or having vacant looks and clumsy gait ,etc.

6. Many of them may have an unusual voice distinguished as hoarse voice or broken voice

## **MENTAL OR COGNITIVE CHARACTERISTICS**

- 1) Mentally retarded children have been found to lack in mental or cognitive abilities and functioning:
- 2) They suffer from attention problems like lack of concentration and inattention, difficulty in arousal of attention to the desired objects and also in sustaining attention to an engaged activity.
- 3) They are quite poor in terms of memorization and forget things quickly. Particularly they are quite deficient in short memory, suffer from rehearsal deficit and have a slow rate of responding.
- 4) Many of them suffer from speech and language problems(e.g. articulation errors). In general , mentally retarded individual demonstrate a slower rate of language and speech development in comparison to normal children. The language of the children who are mentally retarded is sparser in structure and context. As the level of retardation - from moderate to severe - goes higher, they are found to exhibit quite observable deficits in the language development
- 5) They always lag well behind their normal peers in all areas of academic excellence and achievements. In addition they also tend to be under achievers in relation to whatever intellectual level possessed by them.

## **PERSONALITY AND BEHAVIOURAL CHARACTERISTICS**

They exhibit a variety of social and emotional problems and a typical personality make up as follows:

- a. They have motivational problems for taking initiative or proceeding with a task.

- b. They are deficient in terms of emotional and social maturity and have very poor sensitivity to incidental cues, eg. Behave otherwise in a social gathering or situation like talking loudly when silence is required or laughing at the occasion of mourning, etc.
- c. They are more afraid of failure, anxious and withdrawn in comparison to the normal. The frustration suffered on account of their limited intellectual capacities and defective adaptation behaviour, often pushes them to turn into withdrawal or aggressive personality
- d. They are known for their unusual and unwanted disruptive behavior, unpleasant activities and self-injurious behaviour
- e. They show desire and interest either in playing with their parents and close elders or take part in group activities, play etc. with children of lower age group
- f. The creative aspect is almost absent in such children
- g. They have tendency to give up easily when faced with challenging task
- h. They have a very poor self-concept and lack much in self-confidence. It seems that they do have an external locus of control and as such have little control over what happens to them.

### **DETECTING OR IDENTIFYING THE MENTALLY RETARDED**

1. The detection or identification must be carried out during the developmental period, i.e. from the embryonic stage to the end of adolescence, more specifically up to the age of 18 years
2. Behavior should be closely and objectively observed for detecting deficiencies in adaptive behaviour, particularly with regard to ten adaptive skills.
3. In case adaptive behavior is judged to be indicative of possible mental retardation, it should be confirmed through intelligence testing or vice versa

4. In all cases, the low IQ and deficient adaptive behavior both, should be used as criteria for detecting mental retardation.

Some more points to detect MR children are,

- a) Detection before birth
- b) Detection at the time of birth
- c) Collecting history of the causation or development of mental retardation
- d) Assessment of intellectual functioning

### **CLASSIFICATION OF THE MENTALLY RETARDED**

- ✓ Medical system of classification
- ✓ Environmentally influenced or cultural - familial group
- ✓ Unknown pre-natal influence carrying group
- ✓ Infections and intoxication-caused group
- ✓ Trauma or physical agent -caused group
- ✓ Metabolic and endocrine disorder-caused group
- ✓ Gross brain disease-oriented group
- ✓ Perinatal conditions-caused group

### **WHO's classification of Mental Retardation**

<b>Categories of retardation</b>	<b>IQ scores</b>
Profound	Below 20
Severe	20-34
Moderate	35-49
Mild	50-69

### **CAUSES OF MENTAL RETARDATION**

A number of factors are believed to cause mental retardation which may be divided into two categories.

1. Socio-psychological factors
2. Organic or biological factors

**Organic or biological factors:**

**1. Genetic factors:**

Mental deficiency may be established by genetic factors operative at the time of conception in two ways- either through transmission of some defective genes in the chromosomes of one or both parents, or on account of chromosomal aberrations

**2. Infection:**

It is particularly devastating if the mother is infected by this virus during the first six weeks of her pregnancy. It can result in mental retardation and/or deafness, blindness, heart malformation in surviving infants, depending on the fetal organs developing at the time the rubella virus strikes.

Sexual transmitted diseases ( STDs) may also contribute significantly in causing mental retardation among the children through their infected mothers.

**3. Intoxication:**

A number of toxic agents like carbon monoxide, mercury, lead and various immunological agents like anti-tetanus serum or the use of small pox, rabies, and typhoid vaccines may result in brain damage during development after birth.

**4. Trauma:**

Mental retardation may be caused by physical damage to the brain in the form of injuries prior to birth, at the time of delivery by

- a) Pre-natal injuries
- b) Abnormal delivery and birth injuries

- c) Premature birth
- d) Anoxia
- e) Accidental brain injuries

### **Socio-psychological factors**

In an inadequate socio-cultural environment, the children are deprived of the basic necessities of life for their proper physical, intellectual, emotional and social development provides sufficient as well as necessary grounds for the germination and perpetuation of mental sub normality. The deprived individual tends to marry spouses like themselves and their poverty compels them to suffer. The severe environmental deprivation in the form of physical, cultural, emotional and of the child's intellectual development even when his potential at birth is normal. Severe maternal mental or physical illness is another risk factors.

### **PREVENTION OF MENTAL RETARDATION**

- Genetic counseling and voluntary birth control
- Proper care of the mother and child
- Provision of normal and stimulating environment after birth
- Making use of the medical advances and tests
- Provision of public education

### **LEARNING DISABILITIES**

#### **Meaning**

It is a neurological disorder which causes difficulty in the various aspects of learning . Although the exact causes of learning disability are unknown, it is thought to be caused by the brain in the way it receives and processes the information. Due to this, the children may have difficulty in the natural development of the skills such as

speaking, reading, writing, computational skills and to participate in classroom learning activities like their peers. Learning disability is not due to deficiency of intelligence.

Learning disabilities are lifelong. The way in which they are expressed may vary over an individual's life time, depending on the interaction between the demands of the environment and the individual's strengths and needs.

It is not due primarily to hearing, and /or vision problems, socio-economic factors, cultural or linguistic differences, lack of motivation or ineffective teaching although these factors may further complicate the challenges faced by the individuals with learning disabilities.

It may co-exist with various conditions including attentional ,behavioural, and emotional disorders, sensory impairments or other medical conditions.

**Definition:**

It refer to a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal information .These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and reasoning . Hence learning disabilities are distinct from global intellectual deficiency.

**TYPES OF LEARNING DISABILITIES AND THEIR CHARACTERISTICS**

Four types of learning disabilities have been identified. They are

**Dyslexia** - Difficulty reading Problems reading, writing, spelling, speaking

**Dyscalculia** - Difficulty with math Problems doing math problems, understanding time, using money

**Dysgraphia** - Difficulty with writing Problems with handwriting, spelling, organizing ideas

**Dyspraxia (Sensory Integration Disorder)** - Difficulty with fine motor skills  
Problems with hand-eye coordination, balance, manual dexterity

**Dysphasia/Aphasia** - Difficulty with language Problems understanding spoken language, poor reading comprehension

**Auditory Processing Disorder** - Difficulty hearing differences between sounds  
Problems with reading, comprehension, language

### **DYSLEXIA:**

It is a brain-based type of learning disability that specifically impairs a person's ability to read. These individuals typically read at levels significantly lower than expected, despite having normal intelligence. Although the disorder varies from person to person ,common characteristics among people with dyslexia are difficulty in

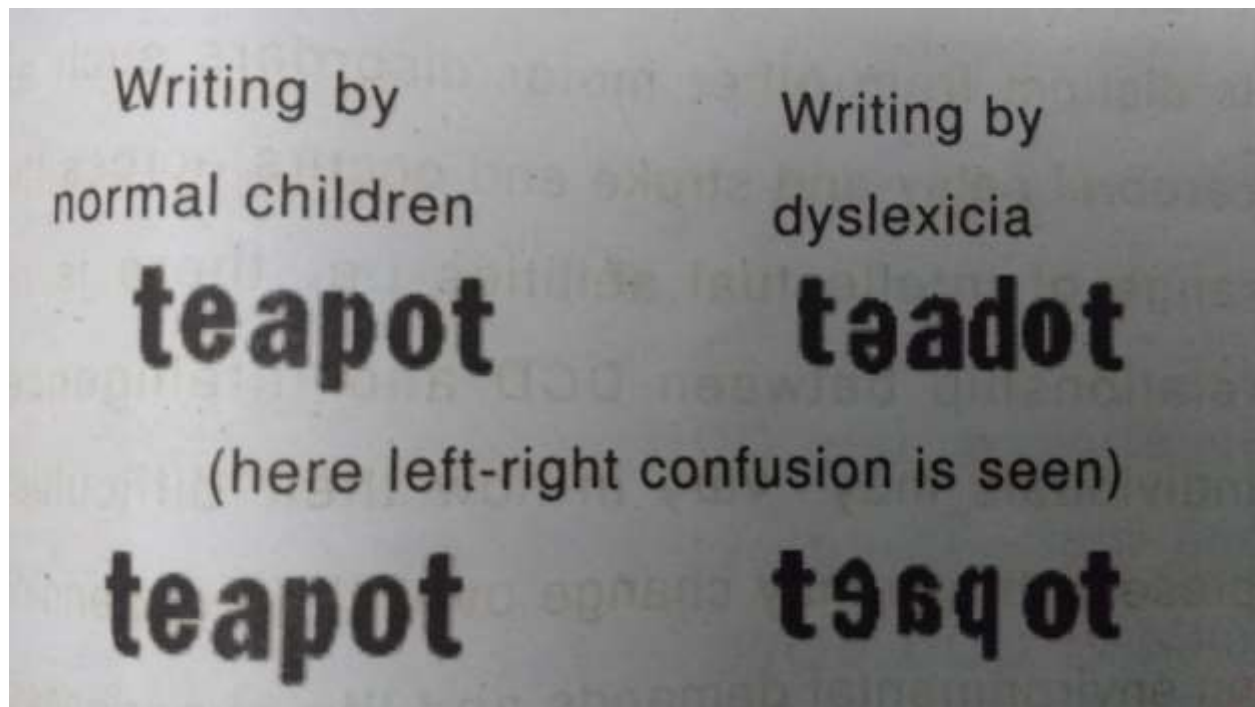
- Spelling
- Phonological processing (the manipulation of sounds) and / or
- Rapid visual
- Verbal responding

In adults, dyslexia usually occurs after a brain injury, or in the context of dementia. It can also be inherited in some families and recent studies have identified a number of genes that may predispose an individual to developing dyslexia.

### **DYSGRAPHIA:**

Children with this kind of learning disability, find it difficult to recognize certain letters and write them properly. They will write words with wrong spellings, write letters improperly. Given below are two examples.





#### **DYSCALCULIA:**

It is difficult in learning or comprehending steps in arithmetic problems, difficulty in understanding numbers, learning how to manipulate numbers and learning mathematical concepts such as quantity, place, value and time and memorizing mathematical facts. Dyscalculics are often referred to as having "poor number sense".

#### **DYSPRAXIA:**

It is a form of **DEVELOPMENTAL CO-ORDINATION DISORDER (DCD)**. It affects fine and / or gross motor coordination in children. It may also affect speech. DCD is a lifelong condition. DCD is distinct from other motor disorders such as cerebral palsy and stroke and occurs across the range of intellectual abilities i.e. there is no relationship between DCD and intelligence. Individuals may vary in how their difficulties present; these may change over time depending on environmental demands and life experiences. Those who are affected by this disability may due to

coordination difficulties, find it difficult in participation and functioning of everyday life skills in education, work and employment.

The affected children may present with difficulties with self-care, writing, typing, riding a two wheeler, play as well as other educational activities. In adulthood many of these difficulties will continue, as well as learning new skills at home, in education and work such as driving a car, operating machines and tools etc. There may be a range of co-occurring difficulties which can also have serious negative impacts on daily life. These include social and emotional difficulties as well as problems with time management, planning and personal organization and these may also affect an adult's education or employment opportunities

Many people with DCD also experience difficulties with memory, perception and information processing. While DCD is often regarded as an umbrella term to cover motor coordination difficulties, dyspraxia refers to those people who have additional problems in planning, organizing and carrying out movements in the right order in everyday situations; Dyspraxia can also affect articulation and speech, perception and thought. Dysphasia is an important form of disability resulting from dyspraxia, brief description of which is presented below:

#### **DYSPHASIA:**

Some children may find difficulty in pronouncing words correctly. They continue to display difficulty in hearing the words pronounced correctly and also may not be able to reproduce the correct pronunciation of words. This is called **phonological disorder** known as Dysphasia.

### **ATTENTION DEFICIT HYPER DISORDER**

#### **Concept of ADHD**

ADHD stands for attention deficit hyperactivity disorder. It is a medical condition. A person with ADHD has differences in brain development and brain

activity that affect attention, the ability to sit still, and self-control. ADHD can affect a child at school, at home and in friendship. ADHD is one of the most commonly diagnosed behavioral disorders of childhood. The disorder is estimated to affect between 3 to 7, out of every 100 school-aged children (American Psychiatric Association(APA), 2000).

### **CHARACTERISTICS OF ADHD**

- ✓ It is quite chronic (unending) behavior or psychological disorder of childhood (usually beginning the early school years)
- ✓ It may cause them cognitive difficulties in their day to day life, schooling and work situation different stages of their life.
- ✓ It is not caused by parental or school failure to discipline or control the child
- ✓ Although what causes ADHD exactly is not known,

Yet the researchers believe that

- It is resulted through some deficiencies or dysfunction of the brain(caused through genetic inheritance injury to the brain)
- The affected child disabled in terms of self-control may give birth to three major problems particularly related to inattention, hyperactivity (exhibiting too much acting out behaviours) and impulsivity (acting without thinking)
- The symptoms of ADHD provide red signals for taking its cognition to the earliest possible
- Its presence in the children provides a big challenge to the parents and teachers in terms of its control and treatment if not cared properly, it may cause unimaginable damage not only to the affected child but also may prove a source of danger to the well-being of the society.

## **CLASSIFICATION:**

ADHD, predominantly inattentive type

ADHD, predominantly hyperactive-impulsive type

ADHD, predominantly combined type (inattention, hyperactivity, impulsivity)

## **ADHD (IDENTIFICATION)**

There is no single test that can be used to diagnose attention deficit hyperactivity disorder in children adults depending on the number and type of symptoms, a person will be diagnosed with one of the subtypes of ADHD: primarily inattentive, primarily hyperactive or combined subtype

Its symptoms based on observation/identification

ADHD is supposed to be identified on the basis of its three predominant symptoms / behavioural characteristics namely inattention, hyperactivity and impulsivity. These three characteristics are visible at times in different situations to some extent in the behavior of all children. More vigorously and frequently-for above the expectations of their developmental age-causing difficulties in their day to day life activities at home schools or other social situations

### **Symptoms of inattention**

- ❖ Often fails to give close attention to details or makes careless mistakes in school work, work, or other activity
- ❖ Often has difficulty sustaining attention in tasks or play activities
- ❖ Often does not seem to listen when spoken to directly
- ❖ Often has difficulty organizing tasks and activities
- ❖ Often easily distracted by extraneous stimuli

### **Symptoms of hyperactivity**

- ❖ Often fidgets with hands or feet or squirms in seat
- ❖ Often leaves seat in classroom or in other situations in which remaining seated is expected
- ❖ Often has difficulty playing or engaging in leisure activities quietly
- ❖ Talks too much
- ❖ Often runs, jumps, and climbs when this is not permitted

### **Symptoms of impulsivity**

- ❖ often blurts out answers before questions have been completed
- ❖ often has difficulty awaiting turn
- ❖ often interrupts or intrudes on others(eg . butts into conversations or games)
- ❖ cannot wait for things

### **CAUSES OF ADHD:**

- Neurological factors
- Genetic factors
- Environmental factors(during injury, complications during pregnancy, fatal exposure to alcohol ,smoking, drug abuse or high levels of lead both are pre and post natal stages.

### **Juvenile Delinquency:**

Juvenile delinquency, also known as "juvenile offending", is participation in illegal behavior by minors (juveniles, i.e. individuals younger than the statutory age of majority). A juvenile delinquent is a person under the age of 18 who has committed a crime and has been taken into custody, charged and adjudicated for that crime. Juveniles can be charged as adults for more serious crimes depending on state laws, prior convictions and the severity of the crimes committed. Adjudication is the equivalent of conviction for the juvenile justice system. Once an offender has been

adjudicated, he or she will be given a disposition. However, if the offender has committed a more serious crime, has prior offenses or falls into a statutory exclusion category, then an entirely different set of rules may apply. Juvenile delinquency occurs when a minor violates a criminal statute. When a juvenile commits a crime, the procedures that take place differ from those of an adult offender. In all states, juvenile court systems, and juvenile detention facilities, deal specifically with underage offenders. While it is common for state statutes to consider people under the age of 18 as minors, the justice system can charge minors even younger as adults, if the crime committed is very serious. Predictors of juvenile delinquencies may appear as early as preschool, and often include:

- Abnormal or slow development of basic skills, such as speech and language
- Chronic violation of the rules
- Serious aggressive behavior toward other students or teachers
- They are most common risk factors for juvenile delinquency include as follows":
- Authoritarian Parenting: characterized by the use of harsh disciplinary methods, and  
refusal to justify disciplinary actions, other than by saying "because I said so."
- Peer Association: usually resulting from leaving adolescents unsupervised, encouraging a child to engage in bad behaviors when acting with his peer group.
- Low Socioeconomic Status
- Permissive Parenting: characterized by lack of consequences for bad behavior, permissive parenting can be broken down into two subcategories: (1) neglectful parenting, which is a lack of monitoring a child's activities, and (2) indulgent parenting, which is the enablement of bad behavior.
- Poor School Performance
- Peer Rejection, ADHD and other mental disorders

# **AUTISM**

## **CONCEPT OF AUTISM**

Advani and chadha (2003) "autism is a brain disorder that typically affects a child's ability to communicate , form relationships with others and respond appropriately to the environment some children with autism are relatively high functioning, with speech and intelligence intact. Others are mentally retarded mute or have serious language delays.

## **CHARACTERISTICS OF CHILDREN WITH AUTISM**

Autism caused by brain dysfunctions essentially causes considerable deficits and abnormalities in the cognitive behavior Children may suffer seriously in terms of their Learning skills such as reading, writing or computational skill

Sensory deficits like over responsiveness or under responsiveness to light noise, touch or pain.

### **Social and emotional behavior**

They do not show any interest in socializing and try to put themselves in their own shells by living in isolation

While remaining in their own world, they may avoid eye contact

Any attempt to love, cuddle (hug) and show affection towards these children draws almost no attention and interest on their part

They do not have any warmth of emotional touch and feelings and are quite unconcerned of others feeling

Most of the time, they focus their interest and attention on inanimate objects, figures and pictures instead of their peers and other people

They do not believe in the ideology of mutual sharing of experiences, activities or even objects with their peers, brothers, sisters, teachers or parents.

## **PHYSICAL CHARACTERISTICS**

Body structure and physiological functioning, the children with autism mostly do not exhibit any extra ordinary differences and deviation from their non-disabled peers. However a few minor physical anomaly (abnormality), particularly related to ears may be found in some children.

## **COMMUNICATION AND LANGUAGE BEHAVIOUR**

Some of them may thus be seen to utter(complete) a few words only after reaching the age of 5 to 6 in terms of the use of language. Many of these children may not at all acquire the ability to speak or understand the spoken language. They may thus be forced to make use of non-verbal means like gesture, vocalization, facial expressions etc. or employ sign language like hearing of speech-impaired peer. They may speak telegraphically, it no considerations of grammar rules eg. rani eat mango, omitting pronouns Ramesh go market instead of saying 'I want to g market' they may exhibit a parrot like behavior (a condition called echolalia) for example if you ask a child what your name is? The child will respond what is your name?

## **DISTURBED OR BIZARRE BEHAVIOUR**

Children with autism may demonstrate the characteristics of rigidity-their resistance to bring any change in the structure of their environment e.g. an autistic child may start crying, screaming or lying down on the floor simply because his chair is out of place

Autistic children may demonstrate serious inappropriate behavior in the shape of throwing prolonged temper tantrums(bad temper) yell(shout) crying or screaming simply for the reason that a certain tumbler is not available for drinking milk repeatedly flicking( brushing) or flapping (shaking or beating) his/her fingers or rocking(swing) back and forth, hand waving(signal) or an obsessive(compulsive) need to



maintain order. They may exhibit self-injurious or self-mutilating behavior ranging from hand biting or head slapping, beating his head against wall or sharp pieces of furniture

## **CLASSIFICATION**

Different types of autism-also known as autism spectrum conditions, autism spectrum disorders .ASDs or pervasive developmental disorders. Pervasives developmental disorder(not otherwise specified) also known as PDD(NOS) or atypical autism

## **DIAGNOSIS AND IDENTIFICATION OF AUTISM**

Usually identified by the time child is 30 months old always by 3 years

Primary sources: family members, parents, caregiver

By observing

Hard of hearing or deaf is not yet began to talk, avoids interactions with others

### **A Psychological diagnostic criterion for autism**

**1. Qualitative impairments** in social interaction as manifested by atleast two of the following

- a) Marked impairment in the use of multiple non-verbal behaviours such as eye-to eye gaze facial expression, body postures, and gestures to regulate social interaction
- b) Failure to develop peer relationships
- c) A lack of spontaneous seeking to share enjoyment , interest or achievement with other people e.g. by a lack of showing, bringing or pointing out objects of interest
- d) Lack of social or emotional intelligence

### **A pediatrician's diagnostic criteria for autism**

Specific questions to be asked to the parents and their child

1. Does your child ever pretend(imagine)
2. Does your child ever use his index finger to point, indicating interest in something  
Exercise for the child
3. Get the child's attention, then point across the room at an interesting objects and any say 'oh look there's a HAT (name of object) watch the child's face. Does the child look to see hat you are pointing out.
4. Get the child's attention, then give the child a miniature toy cup and tea pot and say 'can you make a cup of tea? Does your child pretend to pour out tea, drink it etc.?
5. Say where's the light? Does the child point with his index finger at the light?

## **CAUSES OF AUTISM**

- ✓ Genetic abnormalities (such arguments and findings for the believers in genetic theory could not hold substantial grounds)
- ✓ At the time of birth
- ✓ If there is one child with autism in the family, risks of having next child born with autism is much higher than in the general population
- ✓ A portion of the brain called Amygdala(responsible for directing our emotional responses ) has been found impaired in most of the severely affected autistic children
- ✓ The parietal areas of the brain(responsible for the control of hearing, speech and language) and corpus callosum( a portion of the brain responsible for passing information from one side of the brain to the other) of the autistic children have been found less active than the normal
- ✓ The frontal lobes of the cerebrum(a portion of the brain responsible for problem solving, planning ahead restraining impulses and understanding the

behavior of others) of the autistic children have been found quite less active and energized than the peers without autism

### **EARLY INTERVENTION FOR THE CHILDREN WITH AUTISM**

Any community agency or government setup for providing early intervention program for the autistic children may have the provision of the following services for this purpose

- ❖ Guidance and Counseling of parents and care givers
- ❖ Home visits and observation of the children's behavior
- ❖ Provision of special instruction/guidance for coping with the autism
- ❖ Sensory training
- ❖ Training in self-help and daily living skills, social relations and adaptive skill
- ❖ Speech language pathology

### **Cerebral palsy**

Cerebral palsy is a common development disability first described by William Little in the 1840s the word "cerebral" means having with the brain the word "palsy" means weakness or problems with body movement.

The condition poses considerable diagnostic and therapeutic challenges to the physician with and degree of involvement ranging from mild with minimum disability to severe, associated with several comorbid conditions. It is one of the three most common lifelong development disabilities, the other two being autism and mental retardation causing considerable hardship to affected individuals and their families.

### **DEFINITION**

Cerebral palsy is primarily a disorder of movement and posture. It is defined as an "umbrella term covering a group of non- progressive, but often changing, motor impairment syndromes secondary to lesions or anomalies of the brain arising in the early stages of its development. It may be stated as a static encephalopathy in which,

even though the primary lesion, anomaly or injury is static the clinical pattern of presentation may change with time due to growth and developmental plasticity and maturation of the central nervous system. CP is a common problem the worldwide incidence being 2 to 2.5 per 1000 live births.

Abnormal brain development or injury to the developing brain can cause CP. The damage affects the part of the brain that controls body movement, coordination and posture. It may occur before birth, during birth or shortly after birth. Some children born with CP but may not show symptoms disorder until months or years later. Symptoms usually appear before a child reaches age 3 or 4. The symptoms of CP vary from person to person. Some people may have difficulty in walking and sitting. Other people with CP can have trouble in grasping objects.

#### **Symptoms of cerebral palsy:**

- 1.) It ranges from mild to severe. It delays in reaching motor skill milestones, such as rolling over, sitting up alone or crawling.
- 2.) It delays in speech development and difficulty in speaking.
- 3.) Stiff muscles.
- 4.) Abnormal muscle tone.
- 5.) A lack of muscle coordination
- 6.) Tremors or involuntary movements.
- 7.) Excessive drooling and problems with swallowing
- 8.) Difficulty in walking.
- 9.) Favouring one side of the body, such as reaching with one hand
- 10.) Neurological problems, such as seizures, intellectual disabilities and blindness

#### **Causes for cerebral palsy**

1. A lack of oxygen to the brain during labour and delivery.
2. Severe jaundice in the infant.

3. Maternal infections, such as *German measles* and *herpes simplex*.
4. Brain infections, such as *encephalitis* and *meningitis*.
5. Bleeding into the brain.
6. Head injuries as a result of a car accident, a fall etc.