

Unit - IV

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~~Psychotic Disorders~~
 Mental Retardation
 or
 Mental deficiency.

— It is not a disorder but a deficiency

Definitions

— "Mental Retardation is defined as significantly as sub average intellectual functioning along with deficits with adaptive behaviour and occurring prior to age 18 years old"

— DSM II Denison & Neale

— "Mental Retardation refers to substantial limitations in present functioning. It is characterised by ~~is~~ significantly subaverage intellectual functioning, existing concurrently with related limitations in 2 or more of the following applicable adaptive skill areas -

- Communication, self care, home living, social skills, community use, self direction, health and safety, functional academics leisure and work.

American Psychological Association of Mental Retardation

- Date
- Epidemiological studies show that about 1 to 3 in every 100 individuals in the United States is mentally retarded.
 - Mental Retardation manifest before age of 18.
 - Major characteristics of Mental retardation or Mental deficiency.

- Limited Intellectual Capacity
- Limited Adaptive Behaviors
- Bodily Inferiority
- Social Disability
- No Self Reliance
- No Self Dependence
- Inadaptacy in Education and training
- Limited motivation and emotion
- Cognitive deficiency (Memory, attention, problem solving etc)

Mental Deficiency types and levels

It is divided on 3 basis of criteria which are given below as follows:

① On the basis of criteria of intelligence (IQ Basis)

- Genius \rightarrow $+140$ IQ
- Average \rightarrow $90-110$ IQ
- Moon \rightarrow $50-69$ IQ
(Mental age 8 years or less)
- Imbecile \rightarrow $20-40$ IQ
(Mental age 3-7 years)
- Idiot \rightarrow 20 or less IQ
(Mental age of 3 years)
- Idiot Savant
(they have less IQ but they have a specialised skill)

According to American Psychological Association

- Mild mental MR \rightarrow IQ $52-67$ (9-11 year ^{Mental age})
- Moderate MR \rightarrow IQ $35-51$ (4-7 years)
- Severe MR \rightarrow IQ $20-35$
- Profound MR \rightarrow IQ less than 20

② Criteria of adaptive behaviour
Untrainable: not able to gain and education

Dependent: 5% of Mental retardation

Trainable: Able to get trained
20% of Mental Retardation

Educable: Given education or start a special class
75% of Mental Retardation

Date

(3) On the basis of Clinical criteria

* Down's Syndrome

- It is a condition in which a child is born with an extra copy of the 21st chromosome - hence its other name is trisomy 21. Each cell in our body has 23 pair of chromosomes. One chromosome in each pair comes from your mother and one from your father. But in this syndrome, the patient gets an extra copy of chromosome 21, which means he/she has 3 copies instead of two.

- Down Syndrome was first described by British Physician John Langdon Down in 1866. In this syndrome was named in his name.

- They have flat and wide face, a short neck, excessive joint flexibility, extra space b/w big toe and second toe. Growth in height is slower. They have high risk of obesity as they age.

- Their IQ is 25 - 50 IQ and mental age of 6 to 7 years. (Coverage)
- Problem related to language
- Acceptable social behaviour
- Visual motor skills (like coordinating hands, legs and rest of the body movements with the what the eyes perceive)
- Sociability are good
- They have controlled emotions
- They are able to learn life skills
- Mental health is good
- Premature effect can be seen like wrinkles, memories can be affected
- Glandular (relates to glands) imbalance
- Not hereditary but due to genetic imbalance.
- There is no treatment for this.

* Phenylketonuria.
It is a rare genetic condition that causes an amino acid called phenylalanine to build in the body. Phenylalanine is found in all proteins and some artificial sweeteners. Amino acid is the building block of proteins. It is a protein metabolism imbalance.

- Symptoms are able to be noticed in 6 - 12 months of birth.

- Symptoms are — seizures, tremors, trembling and shaking.
- stunted growth
 - hyperactivity
 - skin conditions like eczema (itchy and inflamed patches of skin.)
 - musty odor of their breath, skin or urine.

— The cause of PKU is an inherited condition caused by a defect in the PAH genes. The PAH gene helps create phenylalanine hydroxylase, the enzyme responsible for breaking down phenylalanine. A dangerous buildup of phenylalanine can occur when someone eats high-protein foods.

Both parents must pass a defective version of PAH gene for their child to inherit this ~~also~~ PKU. If only one parent passes on an altered gene the child won't have any symptom.

* Cretinism

— It is a medical condition present at birth wherein there is a decreased or absent thyroid function and thyroid hormone

production. When untreated, this could lead to severely stunted physical and mental growth of the newborn. This is also known as Congenital Hypothyroidism

- They have big head, neck small, eye lashes thick and small height or we can call dwarf.
- They have abnormal emotional development
- They have late development of motor skills after 4 or 5 years.
- They have IQ level of 25-75
- They talk less, show stubbornness while playing with other children.
- They have quite nature.

* Microcephaly and Macrocephaly

- It is a medical condition in which the brain does not develop properly, resulting in a smaller-than-normal head. (Normal size of brain 22 inches of a child)
- The person have less than 17 inches size of brain.
- Microcephaly may be present at birth or it may develop in the first few years of life.

- Their height is smaller than normal and have cone shaped brain.
- They have IQ level of 25
- They are social and alert.
- They have poor motor function, poor speech, abnormal facial features, seizures.
- No treatment but for prevention it is suggested that during pregnancy stay away from radiation and infections.

* Macrocephaly

- It is a condition in which the human head is abnormally large. This includes the scalp, the cranial bone and other contents.
- The cause is brain tumour, intracranial bleeding, chronic hematomas, certain genetic syndromes and metabolic conditions or some types of infection.
- They have rapid head growth.
- They have either mental disabilities or delays.
- Slowed growth of the rest of the body.
- They may have other conditions like autism or epilepsy.

- The study estimates 15 to 35% of children with autism will have macrocephaly.
- It can be treated by behavioural therapy, language therapy, Physical therapy etc.

* Hydrocephaly

- It is a condition in which ~~cerebro~~ cerebrospinal fluid is found in larger quantity. It typically causes increased pressure inside the skull. Their nerves become thinner.
- The older people may have headaches, double vision, poor balance, urinary incontinence, personality changes or mental impairment.
- In babies, may have rapid increase in head size, vomiting, sleepiness, seizures and downward pointing of the eyes.
- Causes are as follows:
 - The fluid flows from brain to spinal cord in normal condition and the blockage develops prevents
 - ~~the~~ ~~development~~ birth defect in which the spinal column
 - genetic abnormality
 - Central nervous system infections
 - Head trauma
 - Central nervous system tumors

- brain related infections
- head injury
- Brain surgery

— It can be treated by surgery to let fluid flow easily.

★ Turner's Syndrome

- It is a genetic condition in which female is partly or completely missing an X chromosome (X - 0)
- A short and webbed neck, low set ears, low hairline at the back of the neck, swollen hands and feet seen at birth.
- Neck is small and banded.
- They develop menstrual periods and breasts only with hormone treatment and are unable to have children without reproduction technology.
- Heart defects, diabetes and low thyroid hormone occur more frequently.
- They have 30-40 IQ level.

★ Klinefelter Syndrome

- It is a condition in which is result of two or more X chromosomes (X - X - Y) in males.

- The sex gland, absence is absent and have improper development
- The symptoms are weaker muscles, greater height, poor coordination and less body hair.
- IQ is 35-45
- The people have reading difficulties and problems with speech.
- While no cure is known, but a number of treatments may help like physical therapy, speech and language therapy, counselling and adjustments of teaching methods may be useful

* Fragile X Syndrome

- It is a genetic disorder characterized by mild to moderate intellectual disability.
- In this X chromosome is weak and males have more than female because in female there is two X chromosomes (X - X) but in male there is 1 X chromosome.
- They have 25-50 IQ
- Physical features may include long and narrow face, ^(than normal size) large ears, thin and flat nose, flexible fingers.
- Children have problem in working in task which have sequence
- Social behaviour is disruptive and negative.

There testicles are also big.
They have features of autism and delayed speech.
Hyperactivity is common, and seizures occur in about 10%.

* William's Syndrome

- It is a genetic disorder that affects many parts of the body. It is caused because of the spontaneous deletion of genetic material of one member of the pair of chromosome 7.
- This syndrome is rarely found. Eg amongst 20,000 children only 1 child is suffering.
- Facial features include broad forehead, short nose and little bended from above, full cheeks.
- Vocabulary and grammar are good but IQ is less.
- Chances of teeth, heart problem and periods of high blood calcium.
- They have outgoing personality and interact readily or even friendly with strangers.
- There is no cure of this but it is suggested to avoid extra calcium or Vitamin D.
- Behavioural treatments have been shown to be effective.

Prader-Willi Syndrome

- It is a genetic disorder due to loss of functions of specific genes.
- In newborn symptoms include weak muscles, poor feeding and slow development
- Beginning in childhood, the person becomes constantly hungry, which often leads to obesity and type 2 diabetes
- They have mild to moderate intellectual impairment and behavioural problems
- The people have narrow forehead, small hands and feet, short height, light skin and hair, and are unable to have children.
- It has no cure but strict food supervision, exercise programs and counselling can help in other associated conditions like obesity and type 2 diabetes.

Causes of Mental Retardation

- Serious Infections
- Intoxication during pregnancy (drugs and alcohol)
- Deficit in composition of chromosomes
- Inadaptability of metabolism, growth and nutrition
- Hypothyroid
- Damage to brain (injury, radiation, tumours)
- Unknown prenatal influences (Down Syndrome, HPE - Hydrocephaly)

Hydrocephaly

Social Cultural deprivations

- low social ^{economic} status
- Death with divorce of parents

beginning in childhood, the process
 begins (concretely) during which
 leads to obesity and type 2 diabetes
 through a mechanism of hyperphagia
 hyperphagia and behavioral problems
 The 5 people mentioned above
 have one thing in common, they
 are all obese and have type 2 diabetes
 It has not been established that
 there is a causal relationship between
 the obesity and type 2 diabetes
 (the obesity is a consequence of
 the hyperphagia and behavioral problems)
 - Deficit in comparison of neurotransmitters
 - Prolongation of maturation of neurotransmitters
 - Hypothalamic dysfunction
 - Damage to brain (hypothalamic area)
 - Inhibition of leptin signaling
 - Overexpression of ghrelin