

MENTALLY CHALLENGED



- INTRODUCTION..... Challenged condition makes the normal function of individual very difficult and leads to dependency. These conditions are increasing day by day due to changing lifestyle and complicated environment. Challenged children is one who deviated from normal health status either physically, mentally or socially and requires special care, treatment and education

- Mentally challenged..., Intellectual disability (ID), also called intellectual development disorder (IDD) and formerly known as mental retardation (MR). Mental retardation (MR) is a developmental disability that first appears in children under the age of 18. It is characterized as a level of intellectual functioning (as measured by standard intelligence tests) that is well below average and results in significant limitations in the person's daily living skills (adaptive functioning). The term MR as offensive and the term intellectual disability or intellectually challenged is now preferred by most advocates in most English speaking countries.

Definition



- Definition:- Mental retardation refers to significantly sub average general intellectual functioning (BELOW 70) resulting in or associated with concurrent impairments in adaptive behavior and manifested during the developmental period. - American association on mental deficiency, 1983.



- Significant sub average is defined as an intelligence quotient (IQ) of 70 or below on standardized measures of intelligence.
- Adaptive behavior is defined as the degrees with which the individual meets the standards of personal independence and social responsibility expected of his age and cultural group. The expectations of adaptive behavior vary with the chronological age.

- Adaptive skill areas.
 - The deficient in adaptive behavior
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- 1. During infancy and childhood. Sensory and motor skill development Communication skill (including speech and language) Self-help skills. Socialization.
 - 2. During childhood and adolescent Application of basic academic skill to daily life activities. Application of appropriate reasoning and judgment in the mastery of the environment. Social skill.
 - 3. During late adolescent. Vocational and social responsibilities and performance. Note:- developmental period is defined as the period of time between conception and the 18th birth day.



- Epidemiology..... 3 % of the world population is estimated to be mentally retarded. □ In India 5 out of 1000 children are mentally retarded (Indian express 13th march 2001).
- More than 20 million children are suffering with mental retardation. Mental retardation is more common in boys than girls. Mortality is high in severe or profound mental retardation due to associated physical condition. Common in the age group of 2 -3 years. Peak in 10–12 years of age

Nature and Characteristics

- Mental retardation refers to significantly **sub average general intellectual functioning** resulting in or associated with concurrent impairments in adaptive behavior and manifested during the developmental period.
- Characterized by two dimensions: **limited intellectual ability and difficulty in coping with the social demands of the environment.**



Causes

1. Maternal use of alcohol and drugs during pregnancy.
2. Maternal infections (such as HIV)
3. Poverty can cause mental retardation through high chances of:
 - Lead poisoning
 - Inadequate diet
 - Inadequate health care





Manifestations

- Lack of or slow development of motor skills, language skills, and self-help skills, especially when compared to peers
- Failure to grow intellectually or continued infant-like behavior



Etiology Genetic factors



- 1. Chromosomal abnormalities:-
- Down's syndrome . Fragile X syndrome . Trisomy X syndrome
- Turner's syndrome
- Down syndrome. About one-half of all cases of mental retardation are caused by known biological abnormalities like Down syndrome. The cause of Down syndrome is the presence of an extra chromosome. In general, children and adults with Down syndrome function within the moderate to severe range of mental retardation.

- Fragile-X syndrome . Fragile-X syndrome, is the most common known genetic cause of mental retardation. Fragile-X syndrome is indicated by a weakening or break on one arm of the X sex chromosomes, and it is transmitted genetically. Not all children with the fragile-X abnormality have mental retardation. As in fragile-X syndrome, abnormalities of the sex chromosomes are particularly notable

Etiology 2. Metabolic disorders



Phenylketonuria ,Wilsons syndrome ,Galactosemia

- Phenylketonuria..... PKU is caused by abnormally high levels of the amino acid phenylalanine, usually due to the absence of or an extreme deficiency in phenylalanine hydroxylase, an enzyme that metabolizes phenylalanine. Children with PKU have normal intelligence at birth. However, as they eat foods containing phenylalanine, the amino acid builds up in their system. This phenylketonuria produces brain damage that eventually results in mental retardation. Retardation typically progresses to the severe to profound range

- **Cranial malformation**-Hydrocephaly and Microcephaly



- **Gross diseases of brain** .Tuberous sclerosis
Neurofibromatosis .Epilepsy
- **Prenatal factors:-** Infections:-
- Rubella , Cytomegalovirus , Syphilis
,Toxoplasmosis ,Herpes simplex.
- **Endocrine disorders:-** □ Hypothyroidism
,Hypo parathyroidism andDiabetes mellitus

INFECTIONS



Rubella (German measles) is a viral infection that may produce few symptoms in the mother but can cause severe mental retardation and even death in the developing fetus.

The human immunodeficiency virus (HIV) can be transmitted from an infected mother to a developing fetus. The effects on the child are profound, including mental retardation, visual and language impairments, and eventual death.

Syphilis is a bacterial disease that is transmitted through sexual contact. syphilis produces a number of physical and sensory handicaps in the fetus, including mental retardation.

Another sexually transmitted disease, genital herpes, can be transmitted to the infant during birth and result in mental retardation.

Two infectious diseases that occur after birth, encephalitis and meningitis, can cause mental retardation

- **Physical damage and disorders:-** Injury ,Hypoxia , Radiation , Hypertension ,Anemia , Emphysema Intoxication:- ,Lead , Certain drugs ,Substance abuse
- **Etiology Placental dysfunction:-** Toxemia of pregnancy Placenta previa ,Cord prolapse ,Nutritional growth retardation
- **Etiology Perinatal factors:-** Birth asphyxia ,Prolonged and difficult birth ,Prematurity (due to complications) Kernicterus .Instrumental delivery (resulting in head injury, intraventricular hemorrhage)

Etiology Postnatal factors



- **Infections:-** Encephalitis, Measles, Meningitis, Septicemia. Accidents. Lead poisoning
- **Etiology Pregnancy and birth complications**
.One major complication is Rh incompatibility. Another pregnancy and birth complication that can cause intellectual deficits is premature birth. particularly anoxia, or oxygen deprivation; severe malnutrition; and the seizure disorder epilepsy.
- **Etiology Environmental and social-cultural factors:-** Cultural deprivation . Low socio-economic status Inadequate caretakers . Child abuse

PREDISPOSING FACTORS



- Low socioeconomic strata or poverty. Low birth weight of children. Advanced maternal age. Consanguinity. Extreme malnutrition. Lack of stimulating environment. Poor sensory experience. Poor sensory experience
- Defective low standard education due to defective scholastic environment.
- Psychological disadvantage. E.g. poor health practices, poor housing, disuse of language, etc. Parental deprivation. Prolonged isolation of care takers during developmental period. Sensory deprivation and social deprivation.



- Classification.....
- Intelligent quotient is the ratio between mental age (MA) and chronological age (CA). while chronological age is determined from the date of birth , mental age is determined by intelligence test.

TYPES OF MENTAL RETARDATION



- Type IQ range in mental retardation
- 1. Mild (Educable) 50 - 70
- 2. Moderate (Trainable) 35 – 50
- 3. Severe (Dependent retarded) 20 – 35
- 4. Profound (Life support) < 20

Mild retardation

- Mild retardation (Educable) (IQ 50-70):- 85-95% of total mental retardation cases belong to mild mental retardation. Environmental influences, psycho social deprivation, restrictive child rearing practices, malnutrition, low-socio-economic class are the causes for mild mental retardation. They have deficient in intellectual skills, studies up to 6-8th standard, problem in reading and writing, difficult in academic school work, normative living skills, walking, talking, toilet training, language abilities, and development of domestic skill, behavior, social and emotional adjustment like a normal person



- Can fully adjust educable, finds difficulty in complex ideas, drawing generalization, can learn motor skills better than verbal skill and writing, emotionally they are stable, overactive, temper tantrum is common, can understand simple terms, they can be trained in special school. □ In adult life most of them lead independent life in normal surroundings.

Moderate retardation



- Moderate retardation (Trainable) (IQ 35-50)
- 10% of mental retardation cases belong to moderate mental retardation.
- Children can be trainable, aimed at self-help skills, they can speak and support themselves, able to perform semi-skilled or unskilled work under supervision can learn few basic skills. Communication skills develop much slowly, limited progress in scholastic work, studies up to 2nd grade, unaware of needs, have less neuro pathological complications, partially depends on others for their care.

Severe retardation



- Severe retardation (Dependent) (IQ 20-35)
7% of total mental retardation cases, belong to severe MR. Slow motor development in preschool years, trainable for normal living activities, allow them to do daily living activities under supervision, contributes partially to self-maintenance, some children may learn social behavior , able to communicate in simple way , engaged in limited activities, delayed speech and communication skills.

Profound retardation



- Profound retardation (Life support) (IQ < 20) □ 1-2% of mental retardation cases are profound type. □ considerable organic pathology, nervous system is noticed, associated conditions are; blindness, deafness, seizures are common, delayed milestones, motor impairment, totally dependent, cannot do anything on their own. □ Death may occur due to variety of problems or complications.



- Mental Retardation Symptoms of Mental Retardation.. However, all definitions generally agree on the three major criteria for mental retardation: 1) significant limitations in intellectual functioning, 2) significant limitations in adaptive functioning, and 3) onset before age 18 years.

SIGNS AND SYMPTOMS



- SIGNS AND SYMPTOMS ☐ Failure to achieve developmental milestones. ☐ Deficiencies in cognitive functioning such as inability to follow commands or directions. ☐ Reduced ability to learn or to meet academic demands. ☐ Expressive or receptive language problems. ☐ Psychomotor skill deficits.

- Lack of curiosity
- Problems keeping up in school
- Failure to adapt (adjust to new situations)
- Difficulty understanding and following social rules



IDENTIFICATION



- Routine developmental screening can assist in early identification
- The diagnosis of mental retardation is usually made after a period of suspicion by professionals or family members that the child's developmental progress is delayed. □ Diagnosing MR...
- □ In some cases it is conformed at birth because of recognition of distinct syndrome.

Multidisciplinary evaluation



- Multidisciplinary evaluation should be individually tailored to the child. A team of professionals like pediatric neurologist, developmental pediatrician, psychologist, social scientist, speech therapist, physical therapist, special educator, social worker and nurse will evaluate the child. □ Diagnosing MR
- Assessment of milestones like intellectual levels, cognitive ability, language pattern and communication skills, hearing, conative behavior



- Neurological assessment □ Physical examination to exclude physical illness. □ Mental history
- MRI, CT scan to study the structural abnormality of brain for example tuberous sclerosis.
- □ EEG to exclude seizures. □ Culture for cytogenic and biochemical studies. □ Hormonal studies- T₃, T₄, TSH when cretinism is suspected. □ Urine and blood examination for metabolic disorders.

Investigations



- Education evaluation- reading, writing, regularity in schooling, living learning skills, daily living skills, social abilities.
- ☐ Amniocentesis for pregnant mothers to detect chromosomal abnormalities, chorionic villi sampling, chromosomal analysis. ☐ Sensory test – assessment for vision, hearing. ☐ Antibodies for diagnosing infections, LFT in Wilson's disease.



- Through the psychological testing the mental age of the child estimated. The intelligence quotient is then determined using the formula.
- □ Psychological investigation includes Stanford Binet intelligence tests (mental abilities) 2 years and more. Wechler's intelligence scale for children WISC (above 6 years

INTERVENTION



- Programs that maximize speech, language, cognitive, psychomotor, social, self-care, and occupational skills. □ Monitoring the child's developmental needs and problems. □ Environmental supervision. □ Behavior management. □ Treatment modalities for MR.....



- Vocational training. ☐ Provide day schools to train the child in basic skills, such as bathing and feeding.
- ☐ Early intervention programs for children younger than age 3 with mental retardation
- ☐ Family therapy to help parents develop coping skills and deal with guilt or anger.



- Rehabilitation is aimed at reducing disability and providing optimal functioning in a child with mental retardation.
- ☐ This includes rehabilitation in vocational, physical and social areas according to the level of challenged.



- There is now an increasing use of more specialists teaching and a variety of innovative procedures for teaching language and other methods of communication
- . ☐ The aim is that as many mentally retarded children as possible are educated in ordinary schools either in normal classes or in special classes
- ☐ Education and training.....



- Use the training material which is appropriate, attractive and locally available.
- ☐ Rewards his efforts even if the child attains near success.
- ☐ Starts the training with what the child already knows and then proceed to the skill that needs to be trained. By this the child will have a feeling of success and achievement.
- ☐ Give the training regularly and systematically.
- ☐ Give repeated training in each activity.
- ☐ Divide each training activity into small steps and demonstrate.

. □ HINTS FOR SUCCESSFUL TRAINING...



- Remember a mentally retarded child learn very slowly. Tell the parents not to be dejected at the slow progress, nor feel threatened
- □ Assess the child periodically preferably once in a four or six months. □ Remember there is no age limit for training a mentally retarded person. □ Remember children will learn better from children of the same age
- Vocational activities include in vocational training are work preparation, selective placement, post placement and follow up. For example:- MITRA special school and vocational training center for the mentally retarded , Bengaluru, Karnataka.
- □ VOCATIONAL TRAINING.....

HELP FOR FAMILIES.....



- Stages in parent counseling... □ Families are likely to need extra help when their child is approaching puberty or leaving school. □ When the child starts school the parents should not only be kept informed about this progress, but should feel involved in the planning and provision of care. □ Help for families is needed from the time that the diagnosis is first made. □



- :- create awareness in parents regarding their role in training the child.
- □ Stage-II:- help the parents develop right attitude towards their mentally retarded child (to prevent overprotection, rejection, pushing the child too hard). Handle guilty feelings in parents. □ Stage-I:- impart information regarding condition of the mentally retarded child. Avoid giving misleading information or building false hopes in the parents. □ Stages in parent counseling.....

- mentally retarded persons can be taught many things, but they need to be trained systematically.

T¬ Is it true that the mentally retarded persons cannot be taught anything? □ No. mental retardation is a condition which cannot be curable. But timely and appropriate intervention can help mentally retarded person learn several skills. ¬ Is mental retardation curable? □ No , mentally retarded persons are not mentally ill. The mentally retarded persons are just slow in their development.

- □they can perform many jobs under supervision



- In addition learning social skills and adaptive behavior assists the child in building a positive self-image. For older children and adolescent assistance is needed to prepare them for a productive work life

NATIONAL INSTITUTE OF MENTALLY HANDICAPPED



- INDIA as three regional centers located at New Delhi, Kolkata, □ The Association for the Welfare of Persons with a Mental Handicap in Maharashtra (A.W.M.H. Male).
- □ V.D. Indian Society for mentally retarded. Mumbai
- □ MR REHABILITATION CENTERS IN INDIA & MITRA special school and vocational training center for the mentally retarded , Bengaluru, Karnataka.,