



PHYSICAL EDUCATION

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TOPIC NO. 2 CLASSIFICATION OF DISABILITY

Lecture - 50 CLASSIFICATION OF DISABILITY-1

INTRODUCTION

Disability is the consequence of an impairment that may be physical, cognitive, mental, sensory, emotional, developmental, or some combination of these. A disability may be present from birth, or occur during a person's lifetime.

CLASSIFICATION OF DISABILITY

As mentioned above in the introduction that, a disability may be present from birth, or occur during a person's lifetime hence it cannot be termed simply as a health problem. The World Health Organization (WHO) has described disability, as an umbrella term, covering impairments, activity limitations as well as participation restrictions. It is essential to understand what each of these terms exactly mean.

- Impairment is a problem in body function or structure;
- An activity limitation is a difficulty encountered by an individual in executing a task or action;
- Participation restriction is a problem experienced by an individual in involvement in life situations.

Disability is thus not just a health problem. It is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives. Overcoming the difficulties faced by people with disabilities requires interventions to remove environmental and social barriers.

According to the UNICEF children with disabilities are one of the most marginalized and excluded groups in society. Facing daily discrimination in the form of negative attitudes, lack of adequate policies and legislation, they are effectively barred from realizing their rights to healthcare, education and even survival. Estimates suggest that there are at least 93 million children with disabilities in the world, but numbers could be much higher. They are often likely to be among the poorest members of the population. They are less likely to attend school, access medical services or have their voices heard in society. Their disabilities also place them at a higher risk of physical abuse, and often exclude them from receiving proper nutrition or humanitarian assistance in emergencies. The UNICEF has a vision to build a world where every child can grow up healthy, protected from harm and educated, so that they can reach their full potential.

The term disability broadly describes an impairment in a person's ability to function, caused by changes in the various systems or sub-systems of the body, or to mental health. The degree of disability may range from mild to moderate, severe, or profound. A person may have one or in some cases more than one that is multiple disabilities. Disability can be measured objectively that is it can be observed or it can be measured subjectively that is also referred to as self-report.

The conditions causing disability are classified by the medical community as:

- **Inherited** which can also be termed as genetically transmitted;
- **Congenital**, meaning caused by a mother's infection or other disease during pregnancy, embryonic or fetal developmental irregularities, or by injury during or soon after birth;
- **Acquired**, such as conditions caused by illness or injury;
- **Of unknown origin.**

There are various types of disability, as described in the list:

1. Physical Disability
2. Sensory disability
 - a. Vision impairment
 - b. Hearing impairment
 - c. Olfactory and gustatory impairment
 - d. Somatosensory impairment
 - e. Balance disorder
3. Intellectual disability
4. Emotional disability
5. Pervasive developmental disorders
6. Developmental disability
7. Non-visible disabilities
8. Speech impairment

People with disabilities have the same health needs as non-disabled people – for immunization, cancer screening etc. They also may experience a narrower margin of health, both because of poverty and social exclusion (as mentioned by UNICEF), and also because they may be vulnerable to secondary conditions, such as pressure sores or urinary tract infections. Evidence suggests that people with disabilities face barriers in accessing the health and rehabilitation services they need in many settings. The list is very long, when we sit to

discuss all the types of disabilities, hence in this text we will be discussing about physical disabilities, mental retardation (now known as Intellectual Disability), visual impairment, hearing impairment, speech impairment; their causes, functional limitations and characteristics.

PHYSICAL DISABILITY

Not all types of impairment which limit's the physical function of the body can necessarily be categorized as a physical disability. Physical disabilities may include impairments which limit activities of our day to day life such as respiratory disorders (pathological conditions affecting the organs and tissues that make gas exchange possible in higher organisms), blindness, epilepsy (a group of neurological diseases characterized by epileptic seizures or episodes that can vary from brief and nearly long periods of shaking) and sleep disorders. It is a limitation on a person's physical functioning, mobility, dexterity or stamina. It permanently prevents normal body movement.

Physical disability pertains to total or partial loss of a person's bodily functions for instance walking, gross motor skills, bladder control etc. and total or partial loss of a part of the body like in the case of a person with amputation.

Some of the examples of physical disability include:

1. Amputation: The removal of a limb by trauma, medical illness, or surgery.
2. Arthritis: Joint disorder that involves inflammation of one or more joints.
3. Cerebral palsy: Condition marked by impaired muscle coordination and/or other disabilities, typically caused by damage to the brain before or at birth.
4. Upper limbs
5. Multiple-sclerosis (MS): It is a demyelinating disease in which the insulating covers of nerve cells in the brain and spinal cord are damaged.
6. Muscular dystrophy: A hereditary condition marked by progressive weakening and wasting of the muscles.
7. Acquired spinal injury (paraplegia or quadriplegia): Paraplegia is an impairment in motor or sensory function of the lower extremities; Quadriplegia means the paralysis of all four limbs also known as tetraplegia.
8. Post polio syndrome (PPS): It is a condition that affects polio survivors years after recovery from an initial acute attack of the poliomyelitis virus.
9. Spina bifida: is a birth defect where there is incomplete closing of the backbone and the membranes around the spinal cord.

However, there are many different kinds of disability and a wide variety of situations which people experience. Let us now discuss the causes of Physical Disability.

CAUSES

The causes of Physical Disability are:

1. **Prenatal disabilities:** They are acquired before birth due to diseases or substances that have harmed the mother during pregnancy, embryonic or fetal development accidents or genetic disorders.
2. **Perinatal disabilities:** These are acquired during birth due to prolonged lack of oxygen, premature birth etc.

3. **Post natal disabilities:** These types of disabilities are gained after birth due to accidents, infection or other illness.
4. Some other causes of physical disabilities are mentioned as under:
 - a. Some of them are inherited or genetic
 - b. Conditions present at birth
 - c. Serious illness affecting the brain, nerves or muscles
 - d. Spinal cord injury
 - e. Brain injury

FUNCTIONAL LIMITATIONS

Physical disabilities may result from permanent injuries to the brain, spinal cord or limbs which prevents proper movement in parts of the body. Different physical disorders create different functional limitations in the body. Spina bifida causes partial or full paralysis of the legs, bone and joint deformities, curvature of the spine and difficulties with bowel and bladder. Children with cerebral palsy may have difficulties with posture, movement of body parts or the whole body, muscle weakness or tightness, involuntary muscle movement, balance and coordination and eating and talking. Some children with physical disabilities may also have some other disabilities. They may also have communication difficulties.

Life of People with Physical Disability/Disabilities

Having or acquiring a physical disability is not a colossal tragedy and the life of the concerned is not over. It is in fact seen that people with a physical disability can lead a rich and fulfilling life. The hindrance mostly comes from the society and not the disability itself. Like everyone else even people with physical disability get married and/or have children, they make decisions about their own life, they go to work, play sports and by and large tend to be like everyone else.

People with physical disability are not a burden on the community or a drain on the resources of the economy of friends and family. The society needs to understand that people with physical disability have normal comprehension and do not need to be spoken to in a loud voice or be treated as a child. They are human beings who deserve dignity and respect and not pity or charity.

They have normal priorities in life and are capable of executing all that are required to lead a fulfilling life. This can be easily achieved by making our society a more inclusive one. The society can play their part in this by removing the hurdles that come in the life of a person with physical disability such as access to the built environment, getting into a home, accessible public transport and more.

CHARACTERISTICS

Physical disorders are characterized by any bodily ailments which hinder the proper functioning of the different body parts. They may be acquired before birth, during birth or after birth. They may also be genetic.

A physical disorder or disability may exist from birth or it can be acquired later in life. There are many cases that are observed and it is evident that a person may have one disability or a number of disabilities, sometimes a person may be treated as having a disability when in fact he or she might not even be having a disability as in some cases the disability is apparent,

such as the loss of a limb; while in other cases it may be even hidden, such as epilepsy or post polio syndrome.

MENTAL RETARDATION

Mental Retardation (MR) is referred to as a condition that is diagnosed before the age of 18, usually in infancy or prior to birth, that includes below-average general intellectual function, and a lack of the skills necessary for daily living. However with the advancement in medical science the term Mental Retardation got replaced by a much broader term that is Intellectual Disability.

Intellectual disability (ID) also referred to as intellectual development disorder (IDD) or general learning disability is a generalized neuro developmental disorder that is characterized by significantly impaired intellectual and adaptive functioning. This disability may appear at any age. An intellectual disorder is a psychological or behavioural pattern generally associated with subjective distress or disability that occurs in an individual and perceived by the majority of society as being outside of normal development or cultural expectations. A person is considered intellectually disabled if she/he has an IQ (Intelligence Quotient) of less than 70-75.

CAUSES

The most common causes of intellectual disability are:

1. **Genetic conditions:** They may be in the form of abnormal genes inherited from the parents, errors when genes combine, or other reasons. The most prevalent genetic conditions include Down syndrome, fragile X syndrome (common among boys), neurofibromatosis, congenital hypothyroidism, williams syndrome.
2. **Problems during pregnancy:** Especially when the fetus does not develop properly. If the mother drinks alcohol during pregnancy or get an infection like rubella during the pregnancy than they may also have a baby with intellectual disability.
3. **Problems during childbirth:** If a child has problems during labour and birth, such as not getting enough oxygen, he or she may have developmental disability due to brain damage.
4. **Illness or injuries:** Infections like meningitis, whooping cough or measles can lead to intellectual disability.
5. Severe head injury, extreme malnutrition, exposure to toxic substances.
6. Severe neglect or abuse.
7. Iodine deficiency.
8. Absence of the arcuate fasciculus (a bundle of axons that forms part of the superior longitudinal fasciculus).

FUNCTIONAL LIMITATION

A person with intellectual disability (mental retardation) has limitations in two areas:

1. **Intellectual functioning:** Also known as IQ, this refers to a person's ability to learn, reason, make decisions and solve problems.
2. **Adaptive behaviours:** These are skills necessary for day-to-day life, such as being able to communicate effectively, interact with others, and take care of oneself.

Children with intellectual disability learn more slowly than a typical child. People with severe or profound intellectual disability need more intensive support and supervision their entire lives.

People with Intellectual Disability/Disabilities

1. People with mild intellectual disability

A mild intellectual disability is defined as an IQ between 50 and 70. Generally speaking, a person with a mild intellectual disability:

- a. Participates in and contributes to their families and their communities,
- b. Has important relationships in his/her life,
- c. Works in either open or supported employment,
- d. May live and travel independently but will need support of family, friends and the service system,
- e. May learn to read and write.

2. People with moderate intellectual disability

A moderate intellectual disability is defined as an IQ between 35 and 50. Generally speaking, a person with a moderate intellectual disability:

- a. Has important relationships in his/her life,
- b. Enjoys a range of activities with their family, friends and acquaintances,
- c. Understands daily schedules or future events if provided with pictorial visual prompts such as daily timetables and pictures,
- d. Makes choices about what he/she would like to eat, drink, etc.,
- e. May learn to recognize some words in context, such as common signs including 'Ladies', 'Gents' and 'Exit',
- f. May develop independence in personal care,
- g. Will need lifelong support in planning and organization of their lives and activities.

3. People with severe or profound intellectual disability

A severe or profound intellectual disability is defined as an IQ below 35. Generally speaking, a person with a profound intellectual disability:

- a. Recognizes familiar people and may have strong relationships with key people in their lives,
- b. Had little or no speech and relies on gestures, facial expression and body language to communicate,
- c. Requires lifelong help with personal care tasks, communicate and accessing and participating in community facilities, services and activities.

CHARACTERISTICS

It is different form of mental illness like schizophrenia, depression etc. Intellectual disability is considered to be and referred to as a disability rather than a disease. It may appear at any range. They may be caused due to natural as well as man-made situations and reasons. It is characterized by below average intelligence or mental ability and lack of skills necessary for day-to-day living. It makes the learning capacity and speed of a person slower than normal. It delays oral language development and adaptive behaviour skills, difficulty in learning social rules and solving problems, deficit in memory skills etc.

VISUAL IMPAIRMENT

Visual Impairment is a form of sensory disability. Visual or Vision Impairment refers to vision loss of a person to such a degree as to qualify as an additional support need through a significant limitation of visual capability resulting from either disease, trauma or congenital or degenerative conditions that cannot be corrected by conventional means such as glasses, medications or surgery.

The definition of visual impairment in simpler terms is reduced vision not corrected by glasses or contact lenses. The World Health Organization uses the following classifications of visual impairment. When the vision in the better eye with best glasses correction is:

- 20/30 to 20/60 : it is considered mild vision loss, or near-normal vision
- 20/70 to 20/160 : it is considered moderate visual impairment, or moderate low vision.
- 20/200 to 20/400 : it is considered severe visual impairment, or severe low vision
- 20/500 to 20/1000 : it is considered profound visual impairment, or profound low vision
- More than 20/1000 : it is considered near total visual impairment, or near total blindness
- No Light Preception : It is considered total visual impairment, or total blindness.

CAUSES

1. Visual impairment can be due to disease, trauma or congenital or degenerative conditions.
2. Eye disorders such as retinal degeneration, albinism, cataracts, amblyopia, glaucoma etc. lead to visual impairments.
3. Corneal opacification: Eye problems that can lead to scarring or clouding of the cornea, which decreases vision.
4. Diabetic retinopathy: It is a damage that occurs in the retina due to diabetes.
5. Retinitis pigmentosa: It is an inherited, degenerative eye disease that causes severe vision impairment due to the progressive degeneration of the rod photoreceptor of the retina.
6. Retinopathy of prematurity (aka Terry Syndrome): A disease of the eye affecting prematurely-born babies generally having received intensive neonatal care, which is caused due to disorganized growth of the retinal blood vessels which may result in scarring and retinal detachment.
7. Stargardt's disease: Stargardt disease is the most common form of inherited juvenile macular degeneration. The progressive vision loss associated with Stargardt's disease is caused by the death of photoreceptor cells in the central portion of the retina called the macula.
8. Uveitis: The inflammation of the uvea (the pigmented layer that lies between the inner retina and the outer fibrous layer composed of the sclera and cornea).

9. Age related macular degeneration (AMD).
10. Accidents.

FUNCTIONAL LIMITATIONS

People with visual impairment face varying degree of problems depending on their visual demands. They have to depend on external support and aid in order to complete their daily tasks. Those with worsening sight and the prognosis of eventual blindness are at a high risk of suicide. Hindrance in communication between visually impaired and the sighted. Lack of facial expressions, body gestures, dependency, look of disengagement or detachment.

People with Visual Impairment

Visual impairment may cause people difficulties with normal daily activities such as driving, reading, socializing and/or walking.

WHO says that Visual Impairment can limit people's ability to perform everyday tasks and can affect their quality of life and ability to interact with the surrounding world.

Blindness, the most severe form of visual impairment, can reduce people's ability to perform daily tasks, and move about unaided. Good quality rehabilitation allows people with different degrees of visual impairment to fully profit from life, achieve their goals and be active and productive in today's society,

Most of the diseases and conditions causing visual impairment and blindness can be prevented or readily treated with known and cost effective interventions and enable the visually impaired to lead a socially satisfying and economically productive life.

CHARACTERISTICS

It is characterized by reduced vision not corrected by spectacles or contact lenses. It is distributed unequally across age groups. It can either be by birth or after birth at any point of a person's lifetime both by natural and man-made conditions. Studies show that in every region and at every age group, females have a higher risk of being visually impaired than males.

HEARING IMPAIRMENT

Hearing impairment is another form of sensory disorder. It is the category of physical impairment that refers to conditions in which individuals are fully or partially unable to detect or perceive atleast some frequencies of sound which can typically be heard by most people. It exists when there is diminished sensitivity to the sounds normally heard.

If the loss is mild, the person has difficulty hearing faint or distant speech. A person with mild degree of hearing impairment may use a hearing aid to amplify sounds. If the hearing loss is severe, the person may not be able to distinguish any sounds. There are four types of hearing loss:

1. **Conductive:** caused by diseases or obstructions in the outer or middle ear that usually affects all frequencies of hearing. A hearing aid generally helps a person with a conductive hearing loss.

2. **Sensorineural:** results from damage to the inner ear. This loss can range from mild to profound and often affects certain frequencies more than others. Sounds are often distorted, even with a hearing aid.
3. **Mixed:** occurs in both the inner and outer or middle ear.
4. **Central:** results from damage to the central nervous system.

CAUSES

1. Genetics
2. Age
3. Exposure to noise
4. Illness
5. Chemicals
6. Physical trauma
7. Neurological disorders
8. Medications
9. Neurobiological factors

FUNCTIONAL LIMITATIONS

In children, it may affect the development of language and can cause work related difficulties for adults. People have difficulty in hearing conversation, localizing sound and understanding speech in the presence of background noise. People with hearing loss have problem socializing with people around. One of the main limitations of hearing loss is its impact on the individual's ability to communicate with others. This exclusion from communication can have a significant impact on everyday life causing feeling of loneliness, isolation and frustration. It can have adverse effect on the academic performance of children. Apart from the individual level, hearing loss substantially affects social and economic development in communities and countries.

People with Visual Impairment

People with hearing impairment can communicate using numerous methods of communication, such as: American Sign Language (ASL), Finger Spelling, Lip Reading, Written Communication ("Pad and Pencil") and/or Oral Communication. Certain measures should be adapted such as:

- Smile and maintain eye contact during the time you are talking to a person who is hearing impaired. The person always needs to be able to see your lips if he has learned to read lips. If a sign language interpreter is present, talk directly to the person who is deaf, not the interpreter.
- If at all feasible, use complete sentences, especially when communicating with children. Good language development is dependent upon correct use of verbs, adjectives, adverbs, nouns, etc. Restricting communication to a single word or short phrase deprives this population of opportunities to master the English language, thus limiting their academic development.
- Speak slowly and clearly, but do not exaggerate. Be expressive, but not overly so.
- If a word is not understood, try another word. Demonstrate if possible.
- Use sign language only if you're qualified. Otherwise, incorrect information may be conveyed.

- Do not shout. Hearing aids make sounds louder, but they do not clarify the person's reception or understanding of the sound. The presence of a hearing aid does not mean that the person can hear normally.
- If all else fails, use a pad and pencil to communicate. Since this often isolates the person with a hearing impairment from the group, try to use writing only if oral speech, lip reading, sign language, gestures, and finger spelling have failed.
- During group gatherings, seat the person with a hearing impairment so s/he can see others in the group. Try a semi-circle arrangement. If possible, arrange to have an interpreter or note-taker. Use visual aids whenever possible.
- Watch the person who is deaf or hearing impaired carefully for facial expressions and body language that will help you determine the success of your communication.
- If you have trouble understanding the speech of a person who is deaf, do not hesitate to ask him to repeat what he said. Your willingness and desire to communicate is what is most important, not the ease with which you understand.

CHARACTERISTICS

It refers to both partial Hearing loss. It can be pre-lingual and post-lingual. It can also be unilateral and bilateral. Hearing loss increases with age. It may result from genetic causes, complications at birth, certain infectious diseases, chronic ear infections, etc. may cause social exclusion.

SPEECH IMPAIRMENT

Speech impairment is a type of communication disorder where normal speech is disrupted. This can mean stuttering, lisps, etc. Someone who is unable to speak at all due to a speech disorder is considered mute.

There are three levels of classification when determining the magnitude and type of a speech disorder and the proper treatment or therapy:

1. Sounds that the patient can produce
 - Phonemic – can be produced easily; used meaningfully and constructively
 - Phonetic – produced only upon request; not used consistently, meaningfully, or constructively; not used in connected speech
2. Stimulate sounds
 - Easily stimulated
 - Stimulate after demonstration and probing (i.e. with a tongue depressor)
3. Cannot produce the sound
 - Cannot be produced voluntarily
 - No production ever observed

Following are the types of Speech Impairment:

1. Apraxia of speech: Results from stroke or progressive illness, and involves inconsistent production of speech sounds and rearranging of sounds in a word.
2. Cluttering: A speech disorder that is similar to stuttering.
3. Developmental verbal dyspraxia: also known as childhood apraxia of speech.
4. Dysarthria: It is a weakness or paralysis of speech muscles caused by the damage to the nerves and/or brain.

5. Dysprosody: The rarest form of speech disorder often characterized by alterations in intensity, in the timing of utterance segments, and in rhythm, cadence and intonation of words that is caused by neurological pathologies such as brain vascular accidents, brain tumors, etc.
6. Muteness: A complete inability to speak.
7. Speech sound disorders: These types of speech impairments involve difficulty in producing specific speech sounds and are sub-divided into articulation or phonetic disorders and phonemic disorders.
8. Stuttering: It affects approximately 1% of the adult population.
9. Voice disorders: These are impairments that are often physical and involve the function of the larynx or vocal resonance.

CAUSES

1. Stroke or progressive illness (Apraxia of speech)
2. Damage to the nerves or brain, head or neck injuries, surgical accident
3. Parkinsons disease
4. Cerebral palsy
5. Neurological pathologies such as brain vascular accidents, brain tumors, cranioencephalic traumatism.
6. Drug abuse
7. Vocal abuse or misuse

FUNCTIONAL LIMITATIONS

Speech impairment causes inconsistent production of speech sounds. Production of words become more difficult (apraxia of speech). It deprives an individual's particular speech of its characteristics. Some impairments (muteness) also cause complete inability to speak. Speech sound disorders creates difficulty in producing specific speech sounds. It poses difficulty in learning to produce sounds physically and the sound distinctions of a language.

CHARACTERISTICS

Classifying speech into normal and disordered is a problematic task. Only 5% to 10% of the total population has a completely normal manner of speaking and healthy voice. All others suffer from one disorder or another. It may include partial impairment to complete inability to speak. It can be acquired before birth or after birth at any point of life and at any age. Stuttering, a kind of speech disorder affects approximately 1% of the adult population.

CONCLUSION

As discussed in the previous sections it is clear that disability is thus not a health problem. It is a complex phenomenon of reflection of the interaction between features of a person's body and features of the society in which he or she lives. To overcome the difficulties faced by people with disabilities interventions are required to remove environmental and social barriers.

People with disabilities have the same health needs as non-disabled people – for immunization, cancer screening, etc. They may also experience a narrower margin of health, both because of poverty and social exclusion, and also because they may be vulnerable to secondary conditions such as pressure sores, urinary tract infections. Evidence also suggests

that people with disabilities face barriers in accessing the health and rehabilitation services they need in many settings.

Thus in addition to medical aid social help should also be provided so as to help them to become independent, develop self confidence and ultimately help them to lead a socially and economically productive life.