



Disability inclusion in the mainstream

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Abstract

As societies are moving forward, we are understanding the importance of an inclusive world where a person using a wheelchair can access decent work, the person needs to be able to physically move in and out of his or her home; needs to be able to access the public space and transportation; and needs to be able to access the work facilities, in terms of both the built environment and its information and communications systems. Before delving into more details, this study explored the sub-categories of disability which are Mobility/Physical, Spinal Cord (SCI), Head Injuries (TBI), Vision, Hearing and Psychological and provided route to bring into the mainstream. This study understands that the responsibilities needed to be understood by different entities to provide the necessary opportunities and access to persons with disabilities meaning we need build empathy among these bodies to create a sustainable solution. If any one element of the network fails in this obligation, persons are not able to reap the benefit from the other elements. In order for them to be integrated and included in the development agenda, a comprehensive and holistic approach is required. Mainstreaming disability in development or disability-inclusive development is a useful and necessary strategy in this regard.

Keywords: diversity, inclusion, disability, mainstream

Introduction

Modern society is about diversity and inclusion. As human being, we develop certain traits different from one another. As time goes, we need to have the mindset of accepting differences. Diversity and Inclusion are two most important phenomena of the modern philosophy. Diversity is the presence of differences that may include race, gender, religion, sexual orientation, ethnicity, nationality, socioeconomic status, language, (dis)ability, age, religious commitment, or political perspective. Populations that have been-and remain- underrepresented among practitioners in the field and marginalized in the broader society. And Inclusion is an outcome to ensure those that are diverse feel and/or are welcomed. Inclusion outcomes are met when you, your institution, and your program are truly inviting to all. To the degree to which diverse individuals can participate fully in the decision-making processes and development opportunities within an organization or group. Disability is part of being human. Almost everyone will temporarily or permanently experience disability at some point in their life. Over 1 billion people – about 15% of the global population – currently experience disability, and this number is increasing due in part to population ageing and an increase in the prevalence of noncommunicable diseases.

To address the Disability Inclusion, we need to understand the essence of Diversity and Inclusion. This study considers Disability as Diversity in the Society and Mainstreaming the disability signifies the Inclusiveness.

Disability results from the interaction between individuals with a health condition, such as cerebral palsy, Down syndrome and depression, with personal and environmental factors including negative attitudes, inaccessible transportation and public buildings, and limited social support.

A person's environment has a huge effect on the experience and extent of disability. Inaccessible environments create barriers that often hinder the full and effective participation

of persons with disabilities in society on an equal basis with others. Progress on improving social participation can be made by addressing these barriers and facilitating persons with disabilities in their day to day lives.

Classification of Disability

The International Classification of Functioning, Disability and Health, also known as ICF, is a classification of the health components of functioning and disability. The World Health Assembly on May 22nd, 2001, approved the International Classification of Functioning, Disability and Health and its abbreviation of "ICF." This classification was first created in 1980 and then called the International Classification of Impairments, Disabilities, and Handicaps, or ICIDH by WHO to provide a unifying framework for classifying the health components of functioning and disability. The World Health Organization (WHO) published the International Classification of Functioning, Disability and Health (ICF) in 2001 that covers;

- Activity
- Participation
- Body Structures
- Body Functions
- Personal Factors
- Health Conditions
- Activity Limitations
- Functional Limitations
- Environmental Factors
- Participation Restrictions

The ICF is structured around:

Body functions and structure.

Activities (related to tasks and actions by an individual) and participation (involvement in a life situation).

Categories of disability types include various physical and mental impairments that can hamper or reduce a person's ability to carry out their day-to-day activities. These

impairments can be termed as disability of the person to do his/her day-to-day activities. Disability can be broken down into a number of broad sub-categories, which include the following 6 main types of disability.

- Mobility/Physical
- Spinal Cord (SCI)
- Head Injuries (TBI)
- Vision
- Hearing
- Psychological

1. Mobility/Physical Imbalance

It encompasses muscle strength, range of motion, and endurance capacity. If you have great mobility, you're able to move functionally and efficiently with little to no restrictions or difficulty. It means having optimal range of motion. This doesn't mean, however, greater flexibility, although flexibility is certainly an aspect of efficient mobility.

The American Council on Exercise (ACE) calls mobility the cornerstone of fitness, which allows the body to move correctly. Without mobility, postural stability becomes compromised and so your body begins to move improperly, increasing your risk of pain and injury.

ACE separates mobility into two definitions: joint mobility and joint stability, both of which are essential for proper movement.

What Causes Bad Mobility?

If you can't move efficiently or utilize the full functionality of your muscles and joints, then you have bad mobility. Bad mobility not only means a higher injury risk, but it also means lower and inefficient performance levels during physical activity. This affects activities as light as walking to the mailbox to as intense as Ironman competitions. Bad mobility can even affect daily activities, such as cleaning, driving, and even showering if it's serious enough.

There are many causes of bad mobility and the inability to move freely and without pain.

- Muscle imbalances;
- Muscle weakness;
- Tightness;
- Improper alignment and posture;

An injury that is currently in rehabilitation or was not fully or properly rehabilitated.

How to Improve Your Mobility?

To increase and/or improve your mobility, you first need to figure out what is causing your immobility and what's being affected by it. Because decreased mobility is caused by many factors, it's something that should be diagnosed and looked at by a trained professional, such as a physical therapist.

Physical therapists have the training and education necessary to find the underlying cause of your decreased mobility. They will then put a plan into action to help you increase how well you move. Depending on where you're experiencing the problem – whether it's pain and inflammation or inability to move a certain area – they'll look at the problem area and discuss possible outcomes and goals.

Athletic trainers and some certified personal trainers and coaches are also educated about mobility and can recommend exercises that will help increase your range of motion.

2. Spinal Cord (SCI) Disability

A spinal cord injury (SCI) is damage to the tight bundle of cells and nerves that sends and receives signals from the brain to and from the rest of the body. SCI can be caused by direct injury to the spinal cord itself or from damage to the tissue and bones (vertebrae) that surround the spinal cord.

The term 'spinal cord injury' refers to damage to the spinal cord resulting from trauma (e.g. a car crash) or from disease or degeneration (e.g. cancer). There is no reliable estimate of global prevalence, but estimated annual global incidence is 40 to 80 cases per million population. Up to 90% of these cases are due to traumatic causes, though the proportion of non-traumatic spinal cord injury appears to be growing.

Symptoms of spinal cord injury depend on the severity of injury and its location on the spinal cord. Symptoms may include partial or complete loss of sensory function or motor control of arms, legs and/or body. The most severe spinal cord injury affects the systems that regulate bowel or bladder control, breathing, heart rate and blood pressure. Most people with spinal cord injury experience chronic pain.

What Causes Spinal Cord Disability?

The leading causes of spinal cord injury are road traffic crashes, falls and violence (including attempted suicide). A significant proportion of traumatic spinal cord injury is due to work or sports-related injuries. Effective interventions are available to prevent several of the main causes of spinal cord injury, including improvements in roads, vehicles and people's behavior on the roads to avoid road traffic crashes, window guards to prevent falls, and policies to thwart the harmful use of alcohol and access to firearms to reduce violence.

How to Improve Spinal Cord Disability?

Essential measures for improving the survival, health and participation of people with spinal cord injury include the following.

Timely, appropriate pre-hospital management: quick recognition of suspected spinal cord injury, rapid evaluation and initiation of injury management, including immobilization of the spine.

Acute care (including surgical intervention) appropriate to the type and severity of injury, degree of instability, presence of neural compression, and in accordance with the wishes of the patient and their family.

Access to ongoing health care, health education and products (e.g. catheters) to reduce risk of secondary conditions and improve quality of life.

Access to skilled rehabilitation and mental health services to maximize functioning, independence, overall wellbeing and community integration. Management of bladder and bowel function is of primary importance.

Access to appropriate assistive devices that can enable people to perform everyday activities they would not otherwise be able to undertake, reducing functional limitations and dependency. Only 5-15% of people in low- and middle-income countries have access to the assistive devices they need.

Specialized knowledge and skills among providers of medical care and rehabilitation services.

3. Head Injuries (TBI)

Traumatic brain injury (TBI) is a sudden injury that causes damage to the brain. It may happen when there is a blow, bump, or jolt to the head. This is a closed head injury. A

TBI can also happen when an object penetrates the skull. This is a penetrating injury.

Symptoms of a TBI can be mild, moderate, or severe. Concussions are a type of mild TBI. The effects of a concussion can sometimes be serious, but most people completely recover in time. More severe TBI can lead to serious physical and psychological symptoms, coma, and even death.

What Causes Head Injuries (TBI)?

The main causes of TBI depend on the type of head injury:

Some of the common causes of a closed head injury include

- Falls. This is the most common cause in adults age 65 and older.
- Motor vehicle crashes. This is the most common cause in young adults.
- Sports injuries
- Being struck by an object
- Child abuse. This is the most common cause in children under age 4.
- Blast injuries due to explosions.

Some of the common causes of a penetrating injury include

- Being hit by a bullet or shrapnel
- Being hit by a weapon such as a hammer, knife, or baseball bat
- A head injury that causes a bone fragment to penetrate the skull
- Some accidents such as explosions, natural disasters, or other extreme events can cause both closed and penetrating TBI in the same person.

How to Improve Head Injuries (TBI)?

There are steps you can take to prevent head injuries and TBIs:

1. Always wear your seatbelt and use car seats and booster seats for children
2. Never drive under the influence of drugs or alcohol
3. Wear a properly fitting helmet when riding a bicycle, skateboarding, and playing sports like hockey and football

Prevent falls by Making your house safer. For example, you can install railings on the stairs and grab bars in the tub, get rid of tripping hazards, and use window guards and stair safety gates for young children. Improving your balance and strength with regular physical activity

4. Vision Disability

The definition of vision impairment by the Centers for Disease Control and Prevention (CDC) says a visually impaired person's eyesight cannot be corrected to a "normal level".

It may be said that visual impairment is the functional limitation of the eye or eyes or the vision system. This leads to (1-5) –

- Loss of visual acuity and inability of the person to see objects as clearly as a healthy person
- Loss of visual field meaning inability of an individual to see as wide an area as the average person without moving the eyes or turning the head.
- Photophobia – inability to look at light
- Diplopia – double vision
- Visual distortion or distortion of images

- Visual perceptual difficulties or difficulties of perception or any combination of the above features

What Causes Vision Disability?

Vision may be impaired due to multiple reasons. These could be due to eye damage, failure of the brain to receive and read the visual cues sent by the eyes etc.

Underlying diseases may also cause visual impairment. The commonest cause is diabetic retinopathy, age-related macular degeneration, formation of cataracts and raised pressure within the eyes leading to glaucoma.

How to Improve Vision Disability?

There are steps you can take to prevent Vision Disability:

- Your eyes are an important part of your health.
- Have a comprehensive dilated eye exam.
- Maintain your blood sugar levels.
- Know your family's eye health history.
- Eat right to protect your sight.
- Maintain a healthy weight.
- Wear protective eyewear.
- Quit smoking or never start.

5. Hearing Disability

A person who is not able to hear as well as someone with normal hearing – hearing thresholds of 20 dB or better in both ears – is said to have hearing loss. Hearing loss may be mild, moderate, severe, or profound. It can affect one ear or both ears and leads to difficulty in hearing conversational speech or loud sounds.

'Hard of hearing' refers to people with hearing loss ranging from mild to severe. People who are hard of hearing usually communicate through spoken language and can benefit from hearing aids, cochlear implants, and other assistive devices as well as captioning.

'Deaf' people mostly have profound hearing loss, which implies very little or no hearing. They often use sign language for communication.

What Causes Hearing Disability?

Although these factors can be encountered at different periods across the life span, individuals are most susceptible to their effects during critical periods in life.

1. Prenatal Period
 - Genetic factors - Include hereditary and non-hereditary hearing loss
 - Intrauterine infections – such as rubella and cytomegalovirus infection
2. Perinatal period
 - Birth asphyxia (a lack of oxygen at the time of birth)
 - Hyperbilirubinemia (severe jaundice in the neonatal period)
 - Low-birth weight
 - Other perinatal morbidities and their management
 - Childhood and adolescence
 - Chronic ear infections (chronic suppurative otitis media)
 - Collection of fluid in the ear (chronic nonsuppurative otitis media)
 - Meningitis and other infections
 - Adulthood and older age
 - Chronic diseases
 - Smoking
 - Otosclerosis
 - Age-related sensorineural degeneration

- Sudden sensorineural hearing loss

How to Improve Vision Disability?

Many of the causes that lead to hearing loss can be avoided through public health strategies and clinical interventions implemented across the life course.

Prevention of hearing loss is essential throughout the life course – from prenatal and perinatal periods to older age. In children, nearly 60% of hearing loss is due to avoidable causes that can be prevented through implementation of public health measures. Likewise, in adults, most common causes of hearing loss, such as exposure to loud sounds and ototoxic medicines, are preventable.

Effective strategies for reducing hearing loss at different stages of the life course include:

- immunization.
- good maternal and childcare practices;
- genetic counselling;
- identification and management of common ear conditions;
- occupational hearing conservation programmes for noise and chemical exposure;
- safe listening strategies for the reduction of exposure to loud sounds in recreational settings; and
- rational use of medicines to prevent ototoxic hearing loss.

6. Psychological Disability

A psychological disability is defined as a persistent psychological or psychiatric disorder, emotional or mental illness that adversely affects educational performance. As is the case for many students with invisible disabilities, these students are hesitant to disclose their disability. While many are stable and show no symptoms, others may have fluctuations in behavior and performance.

The most common psychological disability among students is depression. It may appear as apathy, disinterest, inattention, irritability, or as fatigue. Most students with psychological disabilities are not disruptive. Many students do experience side effects from the medications they are taking and may request modifications.

What Causes Psychological Disability?

The term psychological disabilities covers a wide range of conditions and may include:

Depression: hopelessness, insomnia or hypersomnia, decreased or increased appetite, lethargy, bouts of crying, irritability, feelings of guilt

Bipolar Disorder: (formerly known as Manic Depression) mood swings from overly high/manic and sometimes irritable to sad and hopeless

Generalized Anxiety & Panic Disorder: excessive anxiety and worry, recurrent panic attacks

Obsessive Compulsive Disorder (OCD): uncontrollable thoughts and repetitive behaviors

Post-Traumatic Stress Disorder (PTSD): difficulty concentrating, hypervigilance, difficulty falling asleep and/or staying asleep, irritability

Schizophrenia: distorted perception of reality, hallucinations, delusions, disorganized thoughts and speech, lack of emotional expression

Eating disorders (Anorexia or Bulimia): unhealthy preoccupation with food and weight, purging, bingeing, reducing caloric intake often leading to physical health problems

How to Improve Psychological Disability?

Getting into mental health treatment, counseling, or therapy is crucial for people with disabilities who are struggling with mental health issues. This is especially true if you're struggling with poor mental health or mental illness as a result of a newly-acquired disability. Speaking with a trusted professional is a great way to resolve your frustration and anger, and can also boost your confidence and self-esteem during this trying time.

In addition to mental health treatment, there are other types of therapy that can positively impact your overall well-being. These include occupational, speech, and physical therapy: Occupational therapy includes self-care, developing employment skills, completing domestic tasks, and enjoying leisure activities. Speech therapy helps improve communication skills, speech articulation, receptive and expressive language skills, and vocabulary. Physical therapy seeks to enhance your quality of life by promoting mobility, providing adaptive solutions for mobility challenges, and increasing sensory assimilation.

Table 1: Division Wise Disability People in Bangladesh

Division	Total People	Disable People	Percentage
Dhaka	4,42,15,107	4,74,988	1.07
Chattagram	3,32,02,326	4,44,606	1.34
Rajshahi	2,03,53,119	3,33,011	1.64
Rangpur	1,76,10,956	3,04,163	1.73
Khulna	1,74,16,645	3,08,185	1.77
Maymansingh	1,22,25,498	1,88,043	1.54
Sylhet	1,10,34,863	1,62,068	1.47
Barisal	91,00,102	1,46,540	1.61
Total	16,51,58,616	23,61,604	1.43

How to bring the disabled back into the mainstream

The future is accessible means that we must all, together, look towards a future where the barriers which stand in people's way no longer exist. We envisage a future where people can access a building without using stairs; where a person can access a ramp to the beach; or can get a job without fear of discrimination; or can access a mainstream classroom. Working towards an accessible future is everyone's responsibility. We must create a future which demands that people are not excluded because of their health impairments. Call out barriers wherever you see them, and work with us to overcome them.

The annual observance of the International Day of Persons with Disabilities (IDPD) was proclaimed in 1992, by the United Nations General Assembly resolution 47/3. Celebrated on 3 December around the world, IDPD mobilizes support for critical issues relating to the inclusion of persons with disabilities, promotes awareness-raising about disability issues and draws attention to the benefits of an inclusive and accessible society for all. Bangladesh has supported the convention on the rights of the persons with disability, abrogated the existing law and promulgated the new law 2013 in accordance with the UN charter.

More than one billion people currently experience disability, which equates to approximately 15% of the world's population. Disability disproportionately affects marginalized, disadvantaged or at-risk populations such as women, older people, and people who are poor. Children from poorer households, indigenous populations, and those in ethnic minority groups are also at a significantly higher risk of experiencing disability. Lower income countries

have a higher prevalence of disability than higher income countries. There is strong evidence for a link between disability and poverty in low and middle income countries and an urgent need for further research and policy action to break the cycle.

Bangladesh, a low resource country in south Asia, launched rehabilitation medicine services in some 50 years back but a snail's pace progress creates a sordid saga in this world's most densely populated country. The structures of primary health care delivery systems in Bangladesh have no provision of priority care for disabled and have scarcity of skilled manpower to address the disabled. In Bangladesh like many other low- and middle-income countries (LMICs) there is a shortage of workers with appropriate rehabilitation skills, resulting in task-shifting practices. For rehabilitation services in many LMICs, there are challenges within operational healthcare systems in terms of policy, funding structure/infrastructure, capacity, human and physical resources, and technology.

A core set of clinical skills need to be developed for health-related community-based rehabilitation (CBR) work in LMICs. Important aspects are assessment, monitoring and reporting; behavioral and cognitive interventions; education; provision of aids, assistive devices and technologies; psychosocial support; recreational therapy; self-care; supervision; vocational rehabilitation and working with families.

CBR has improved the quality of life, access to medical services, functional independence, autonomy, community inclusion, and empowerment of people with disabilities (PWD) in LMICs in the Asia-Pacific region. However, challenges in the implementation of CBR need to be faced. These include lack of awareness and understanding of CBR, and physical, environmental, socio-economical and personal barriers.

We need to address the capacity building of rehabilitation health workforce at the community level. We should train the health workforce for clinical skills so that they can apply their knowledge to the health needs of the disabled. Some organizations are working independently on different components of CBR, but health components are inadequately addressed. Community-based approach to different components of primary health care should be integrated with community-based rehabilitation (CBR)'s structured medical care which includes optimizing functions by medical treatment, therapy, assistive devices, etc. These concepts will be more financially viable than establishing separate CBR services.

Funding and planning are major hindrances to capacity building of rehabilitation health workforce. Bangladesh, a growing economy in South Asia also has rising health indexes but rehabilitation services are squeezed at the bottom of cauldron. To sustain the growing trend in health indexes, medical rehabilitation services at the community level need to be urgently implemented particularly with comprehensive approach to people at low resource outset. Community-based rehabilitation services can benefit the marginalized population and should follow the WHO-guided CBR matrix. Large number of rehabilitation health workforce needs to be recruited and trained to reduce the burden of disability in the society. Psychiatrists or rehabilitation specialists must be involved in all steps of medical rehabilitation services to ensure clinical skills to service providers. Improving the quality of life of millions

of disabled and bringing them into mainstreams of development in LMICs is the crying need of time. The emerging economy of Bangladesh will flourish through the participation of millions of disabled if we can adequately address them medically and socially.

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