

Accessible Computing Seminar

Lecture #1 – What is a Disability?

How many people are disabled?

- There are approximately 7.8 billion people in the world (as of April 2019)
- Over a billion people, about 15% of the world's population, have some form of disability.
- Between 110 million and 190 million adults have significant difficulties in functioning.
- Rates of disability are increasing due to population ageing and increases in chronic health conditions, among other causes.
- People with disability have less access to health care services and therefore experience unmet health care needs.

• (World health Organization, January, 2008)

How many people are disabled

- Over a billion people are estimated to live with some form of disability.
- This corresponds to about 15% of the world's population.
- Between 110 million (2.2%) and 190 million (3.8%) people 15 years and older have significant difficulties in functioning.
- The rates of disability are increasing in part due to ageing populations and an increase in chronic health conditions.
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Disability and Diversity in the Disabled

- Disability is extremely diverse. While some health conditions associated with disability result in poor health and extensive health care needs, others do not. However all people with disability have the same general health care needs as everyone else, and therefore need access to mainstream health care services. Article 25 of the UN Convention on the Rights of Persons with Disabilities (CRPD) reinforces the right of persons with disability to attain the highest standard of health care, without discrimination.

Unmet Needs For Health Care

- People with disability report seeking more health care than people without disability and have greater unmet needs.
 - 35-50% of people with serious mental disorders, showed that between 35% and 50% of people in developed countries received no treatment in the year prior to the study.
 - 76% - 85% of people with serious mental disorders in developing countries, received no treatment in the year prior to the study.

Unmet Needs For Health Care

- Health promotion and prevention activities seldom target people with disability.
 - Women with disability receive less screening for breast and cervical cancer than women without disability.
 - People with intellectual impairments and diabetes are less likely to have their weight checked.
 - Adolescents and adults with disability are more likely to be excluded from sex education programs.

Disability takes many forms

- Permanent disability
- Temporary disability
- Situational impairments
- Disability due to aging
- Visible? Or Invisible?
- Temporary? or Long Term?
- Static, Episodic or Degenerating?
- Painful? Or Inconsequential?

Classifying Disabilities

- The Indian Government classifies 21 types of disabilities:

Blindness	Low Vision
Leprosy Cured persons	Locomotor Disability
Dwarfism	Intellectual Disability
Mental Illness	Cerebral Palsy
Specific Learning Disabilities	Speech and Language disability
Hearing Impairment	Muscular Dystrophy
Acid Attack Victim	Parkinson's disease
Multiple Sclerosis	Thalassemia
Hemophilia	Sickle Cell disease
Autism Spectrum Disorder	Chronic Neurological conditions
Multiple Disabilities including Deaf Blindness	

Classifying Disabilities

- Visual – Total, low-vision, color-blind
- Hearing – Deaf or hard of hearing
- Cognitive – Dyslexia, short term memory loss, Dementia
- Mobility – Inability to walk or use arms
- Mental – Depression, Anxiety
- Speech – Inability to speak, Stuttering
- Nonvisible – Asthma, epilepsy
- Multiple Disability – E. g., Deaf-blindness

Definition of Disability by Severity

Types of disabilities (applicable age group)	Non-severe	Severe
Had difficulty seeing words in ordinary newsprint, hearing a normal conversation, or having speech understood (aged 6 and older).	√	
Was deaf, blind, or was unable to see, hear, or have speech understood (aged 6 and older).		√
Had difficulty moving arms or legs (under 3 years).	√	
Had difficulty walking, running, or playing/taking part in sports (aged 3 to 14).	√	
Had difficulty performing one or more functional activities: walking, using stairs, lifting/carrying, or grasping small objects (aged 15 and older).	√	
Unable to perform one or more of the functional activities (aged 15 and older).		√
Used a wheelchair, cane, crutches, or walker (aged 6 and older).		√
Had difficulty with one or more activities of daily living (ADLs): getting around inside the home, getting in or out of bed or a chair, bathing, dressing, eating, or toileting (aged 6 and older).	√	
Needed assistance of another person to perform one or more ADLs (aged 6 and older).		√

Definition of Disability by Severity

Types of disabilities (applicable age group)	Non-severe	Severe
Had difficulty with one or more instrumental activities of daily living (IADLs): going outside the home, managing money and bills, preparing meals, doing light housework, taking prescription medicines, or using the telephone (aged 15 and older).	√	
Needed assistance of another person to perform one or more IADLs (aged 15 and older).		√
Had difficulty with schoolwork (aged 6 to 19).	√	
Was limited in the kind or amount of housework (aged 16 and older).	√	
Had difficulty finding a job or remaining employed (aged 16 to 72).		√
Had a learning disability such as dyslexia (aged 6 and older).	√	
Had Attention Deficit Hyperactivity Disorder (aged 6 to 14).	√	
Had Alzheimer's disease, dementia, or senility (aged 15 and older).		√
Had a developmental delay (under 6 years).		√
Had an intellectual disability or a developmental disability, such as autism or cerebral palsy (aged 6 and older).		√

Definition of Disability by Severity

Types of disabilities (applicable age group)	Non-severe	Severe
Had some other developmental condition for which received therapy or diagnostic services (aged 6 to 14).		√
Had some other developmental condition for which received therapy or diagnostic services (aged 6 to 14).	√	
Had one or more selected symptoms that interfered with everyday activities: was frequently depressed or anxious, had trouble getting along with others, had trouble concentrating, or had trouble coping with stress (aged 15 and older).		√
Had some other type of mental or emotional condition (aged 15 and older).	√	

Prevalence of Disability for Selected Age Groups: 2005 and 2010 (Numbers in thousands)										
Category	2005 ¹				2010				Difference	
	Number	Margin of Error (±) ²	Percent	Margin of Error (±) ²	Number	Margin of Error (±) ²	Percent	Margin of Error (±) ²	Number	Percent
All ages	291,099	*****	100.0	(X)	303,858	*****	100.0	(X)	**12,760	(X)
.. With a disability	54,425	894	18.7	0.3	56,672	905	18.7	0.3	*2,247	-
... Severe disability	34,947	601	12.0	0.2	38,284	654	12.6	0.2	+3,337	+0.6
Aged 6 and older	266,752	84	100.0	(X)	278,222	88	100.0	(X)	*11,469	(X)
.. Needed personal assistance	10,996	336	4.1	0.1	12,349	386	4.4	0.1	*1,353	+0.3
Aged 15 and older	230,391	*****	100.0	(X)	241,682	*****	100.0	(X)	**11,291	(X)
.. With a disability	49,069	794	21.3	0.3	51,454	838	21.3	0.3	*2,385	-
... Severe disability	32,771	567	14.2	0.2	35,683	631	14.8	0.3	*2,912	+0.5
... Difficulty seeing	7,793	350	3.4	0.2	8,077	354	3.3	0.1	284	-
... Severe	1,783	129	0.8	0.1	2,010	139	0.8	0.1	*228	0.1
... Difficulty hearing	7,809	325	3.4	0.1	7,572	320	3.1	0.1	-237	*-0.3
... Severe	993	103	0.4	-	1,096	122	0.5	0.1	103	-
Aged 21 to 64	170,349	185	100.0	(X)	177,295	193	100.0	(X)	*6,945	(X)
.. With a disability	28,141	622	16.5	0.4	29,479	705	16.6	0.4	*1,338	0.1
... Employed	12,838	495	45.6	1.2	12,115	432	41.1	1.0	*-723	*-4.5
... Severe disability	18,705	469	11.0	0.3	20,286	566	11.4	0.3	*1,581	+0.5
... Employed	5,738	277	30.7	1.2	5,570	261	27.5	1.0	-167	*-3.2
... Nonsevere disability	9,436	403	5.5	0.2	9,193	374	5.2	0.2	-243	*-4.1
... Employed	7,100	356	75.2	1.6	6,544	311	71.2	1.6	*-556	*-4.1
.. No disability	142,208	636	83.5	0.4	147,816	733	83.4	0.4	*5,607	-0.1
... Employed	118,707	678	83.5	0.3	116,881	862	79.1	0.4	*-1,826	*-4.4
Aged 65 and older	35,028	*****	100.0	(X)	38,599	*****	100.0	(X)	**3,571	(X)
.. With a disability	18,132	324	51.8	0.9	19,234	327	49.8	0.8	*1,102	*-1.9
... Severe disability	12,942	273	36.9	0.8	14,138	276	36.6	0.7	*1,196	-0.3



