BHARATHIDASAN UNIVERSITY

Tiruchirappalli – 620024

Tamil Nadu, India

Centre for Differently Abled Persons

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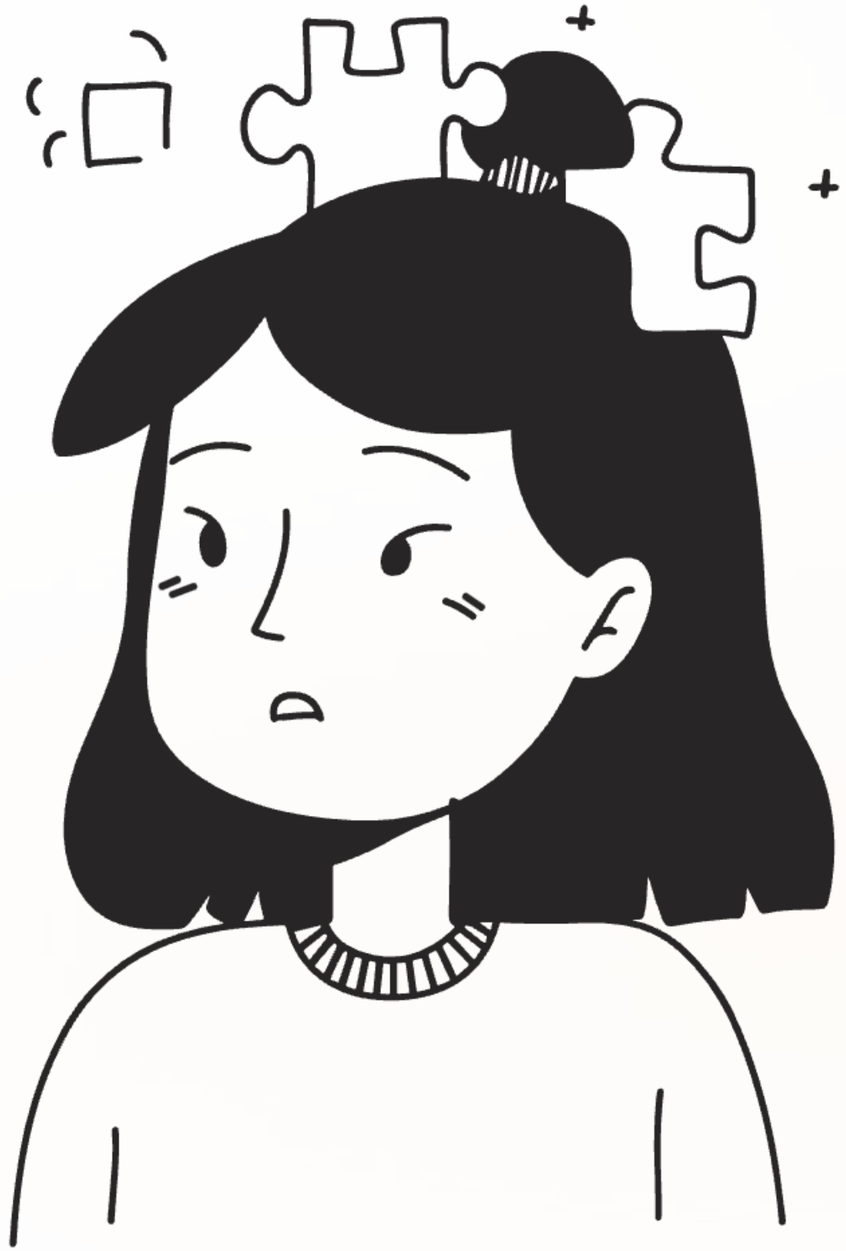
Unit IV CAUSES OF DISABILITIES

COMPILED BY

DR. M. PRABAVATHY & MS.V.ANSELM

ASSISTANT PROFESSOR GUEST FACULTY

CENTRE FOR DIFFERENTLY ABLED PERSONS



Causes of Disabilities

This presentation will explore the multifaceted nature of disability, examining various factors that contribute to its occurrence. We will delve into genetic, prenatal, perinatal, postnatal, socioeconomic, and lifestyle influences that can impact health and development. By understanding these causes, we can work towards prevention, early intervention, and a more inclusive society.

Introduction: Understanding the Complexity of Disability Disability

Disability is a complex phenomenon with diverse causes, affecting millions worldwide. It's not solely a medical condition, condition, but a social construct shaped by environmental, cultural, and societal factors. It's crucial to approach disability disability from a holistic perspective, considering individual experiences and the broader context of social determinants of determinants of health.

The World Health Organization (WHO) defines disability as an an umbrella term encompassing impairments, activity limitations, and participation restrictions. This model emphasizes the interaction between individual health conditions and the environment, acknowledging how societal societal barriers can exacerbate disability.

Genetic Factors: Inherited Conditions Conditions and Chromosomal Abnormalities

Inherited Conditions

Certain genetic disorders, like cystic fibrosis or sickle cell anemia, are passed down through families. These conditions involve mutations in specific genes, leading to altered protein production or function.

Chromosomal Abnormalities

Conditions like Down syndrome arise arise from extra or missing chromosomes, disrupting normal development. These abnormalities can affect a wide range of physical, cognitive, and developmental processes.

Genetic Testing

Advances in genetic testing allow for early detection of potential genetic conditions. This can enable proactive interventions, such as counseling, gene therapy, and personalized treatment plans.

Prenatal Factors: Maternal Health and Environmental Exposures

Infections

Maternal infections, such as rubella or cytomegalovirus, during pregnancy can harm fetal development, leading to a range of disabilities. Vaccination can effectively prevent many of these infections.

Environmental Toxins

Exposure to environmental toxins, like lead or mercury, can negatively impact fetal growth and development. Reducing exposure through safe practices and regulations is essential.

Maternal Nutrition

Nutritional deficiencies, especially in folate and iodine, can lead to birth defects and developmental issues. Pregnant women should consume a balanced diet to support fetal health.

Perinatal Factors: Complications During Pregnancy and Childbirth

1. Premature birth (before 37 weeks) can lead to various disabilities due to underdeveloped organs and systems. Early interventions can improve outcomes for preterm infants.

2. Low birth weight (less than 5.5 pounds) increases the risk of health complications and developmental delays. Proper prenatal care can help reduce the likelihood of low birth weight.

3. Birth trauma, such as oxygen deprivation or cord entanglement, can cause brain damage and other disabilities. Safe birthing practices and skilled medical professionals are crucial.

Postnatal Factors: Injuries, Infections, and Acquired Conditions

1

Accidents and injuries, especially in early childhood, can lead to physical physical disabilities. Safety precautions and proper supervision can reduce the risk of accidents.

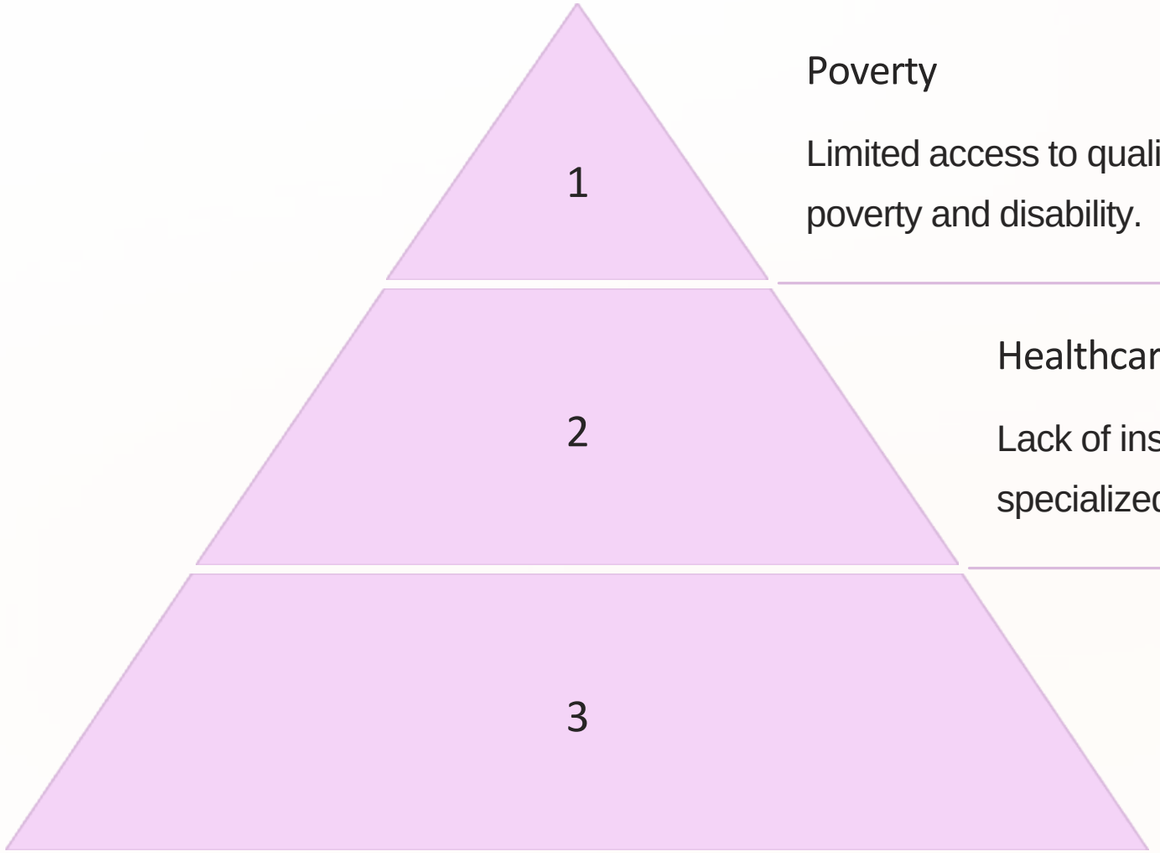
2

Infections, like meningitis or encephalitis, can cause brain damage and developmental disabilities. Immunizations and timely medical treatment are essential.

3

Acquired conditions, such as stroke, spinal cord injury, or multiple sclerosis, can occur at any age and lead to a wide range of disabilities.

Socioeconomic Factors: Poverty, Access to Healthcare, and Health Disparities



Poverty

Limited access to quality healthcare, nutrition, and education perpetuates a cycle of poverty poverty and disability.

Healthcare Access

Lack of insurance, inadequate healthcare infrastructure, and limited access to specialized services exacerbate disability.

Health Disparities

Certain populations, like minorities or those living in rural areas, experience higher rates of disability due to systemic inequalities.

Disability Risk Factors: Age, Chronic Diseases, and Lifestyle Lifestyle Choices

1

Age

As people age, they are more prone to chronic diseases, injuries, and conditions that can lead to disability.

2

Chronic Diseases

Conditions like diabetes, heart disease, and arthritis can lead to physical limitations and disabilities over time.

3

Lifestyle Choices

Unhealthy habits, such as smoking, poor diet, and lack of physical activity, can increase the risk of chronic diseases and disability.

Prevention and Early Intervention: Strategies to Reduce Disability

1

Prenatal Care

Regular checkups, nutrition counseling, and vaccinations during pregnancy can help help prevent many birth defects.

2

Early Detection

Screening programs for genetic conditions and developmental delays allow for early early intervention and support.

3

Accessible Healthcare

Providing affordable, accessible, and culturally sensitive healthcare services for all can can reduce health disparities.

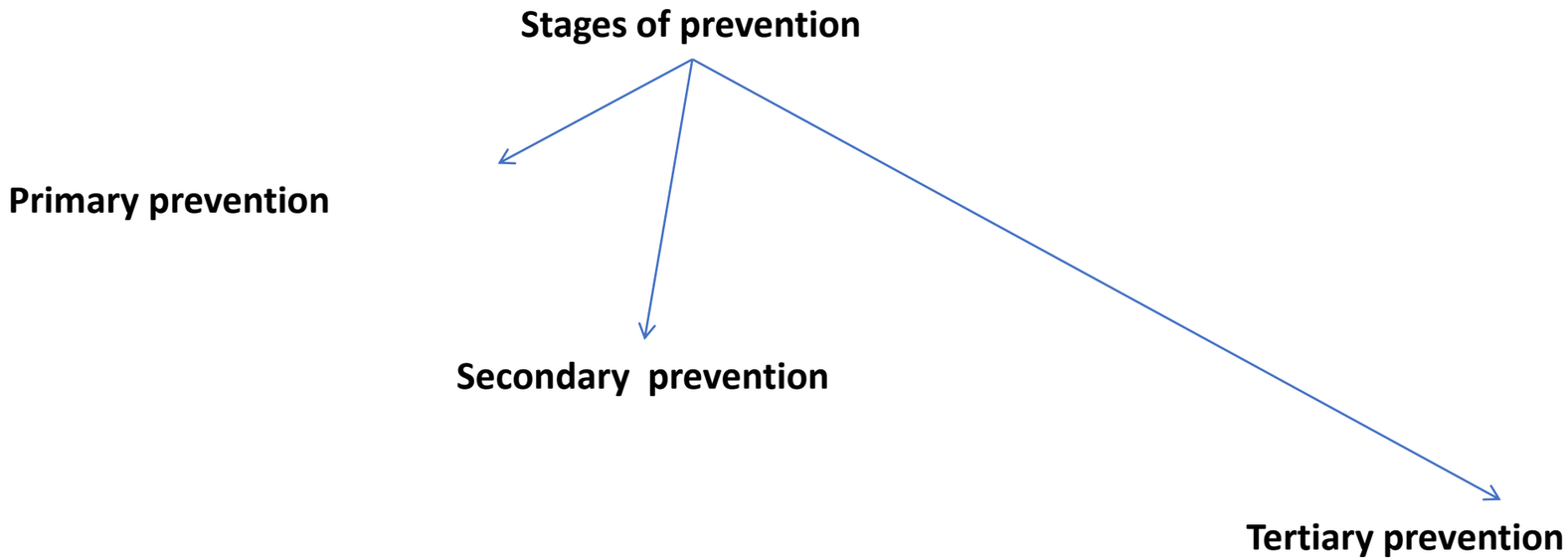
4

Social Support

Community programs, assistive technology, and inclusive education can empower individuals with disabilities.

Stages of prevention

Preventive screening for genetic disorders, including developmental disabilities, is an essential component in uncovering possible disorders early, thus enabling timely medical intervention



prevention

Primary	Secondary	Tertiary
•genetic counselling •immunization programmes •improved prenatal, perinatal and postnatal care •regulations and legislation •other related means.	**Secondary prevention** Secondary prevention strategies aim at reducing the duration or severity of disability. These activities provide early identification of the disabling condition followed by prompt treatment and intervention to minimize the development of disability. These strategies can be applied either at the prenatal or neonatal level.	**Early recognition of disability** To apply any of the previously mentioned preventive measures successfully, the first step is an accurate and early recognition of the disability. The main aims of rehabilitation of the disabled are: to increase awareness of disabilities and the needs of disabled people; to encourage their full integration in society; and to improve prevention and stimulate a more sensitive and understanding attitude.

Amniocentesis procedures can be used to identify Down Syndrome pre-natally

Table 1 **Tests used in early identification of disability or diseases that may lead to disability**

Stage	Test	Diagnosis
Prenatal	Maternal α-fetoprotein	
	—elevation	Neural tube defect
	—decrease	Trisomy 21, trisomy 18
	Maternal unconjugated estral decrease	Trisomy 21, trisomy 18
	Maternal human chorionic gonadotropin elevation	Down syndrome
	Ultrasonography	Down syndrome and other physical defects
	DNA analysis of amniotic fluid, chorionic villi or fetal blood	Several inborn errors of metabolism
	Cytogenetics	Numeric and structural anomalies of the chromosomes
Neonatal	Estimation of phenylalanine	Phenylketonuria
	Estimation of other amino acids	Aminoaciduria
	Estimation of the level of thyroid hormones	Hypothyroidism
	DNA analysis	Several inborn errors of metabolism Cystic fibrosis Thalassaemias Other haemoglobinopathies Duchenne muscular dystrophy Fragile X syndrome Huntington disease Myotonic dystrophy Haemophilia
Carrier detection	DNA analysis	As above
	Specific tests for each disorder (enzyme assays, electrophoresis, protein estimations, others)	

Conclusion: Addressing the Multifaceted Causes of Disabilities Disabilities

Understanding the complex interplay of genetic, prenatal, perinatal, postnatal, socioeconomic, and lifestyle factors that contribute to disability is disability is crucial for developing effective prevention and intervention strategies. By addressing these causes, we can create a more inclusive society that embraces diversity, fosters equity, and empowers individuals individuals with disabilities to reach their full potential.

THANK YOU