



Determinants of Health

Objectives:

- Understand the spectrum of health in relation to health and sickness
- Define; health, disease, illness and wellbeing
- Define and understand the determinants of health; biological, behavioral, socio and cultural, environmental, socioeconomic, health services, aging and gender
- Understand the concepts of “right to health “ and “health for all”

Resources: Doctors’ slides

Important | **Notes** | **Extra**

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Spectrum of health

- Health and disease lie along a **continuum**, and there is no single cut-off point
- The lowest point on the health-disease spectrum is **death** and the highest point corresponds to the WHO definition of **positive health**
- The **health** of an individual is not static; it is a **dynamic phenomenon** and a process of continuous change
- There are degrees or "**levels of health**" as there are degrees or severity of illness. As long as we are alive there is some degree of health in us.



- Health is a dynamic phenomenon
- Transition is often gradual, and where one state ends and another begins is a matter of judgment

Health- A relative concept

It is relative to

- where on the spectrum of health this patient is.
- the **health dimensions (physical, mental, social, spiritual, emotional, vocational dimensions)**
- local conditions and health standards.

For ex: a newborn baby in India weighs 2.8 kg on an average compared to 3.5 kg in the developed countries, and yet compares favorably in health.

Defining Health

- Communities have their concepts of health, as part of their culture.
- The oldest definition is that health is the "absence of disease".
- World Health Organization (1948)

"Health is a state of complete **physical, mental** and **social well-being** and not merely an absence of disease or infirmity"

- In recent years, this statement has been amplified to include the ability to lead a "**socially and economically productive life**"

Defining Disease and Illness

Disease

"A condition in which the body health is impaired"

Illness

"A phenomenon in which one or more natural functions of the body are so disturbed that the affected individual cannot meet the natural requirements of everyday life."

- if disturbance is severe + short duration >> acute illness
- Long duration + without disability >> chronic illness

Defining Wellbeing

There is no satisfactory definition of the term well-being!

Ecology of health

- Ecology derived from the greek word '*oikos*' meaning a house
- Human ecosystem includes
 - Natural environment
 - Man-made environment (physical, chemical, biological, psychological)
- According to this concept, health seen as an equilibrium between man and his environment

Environment affects health?

- Urbanization(هجرة الناس من القرى إلى المدن)
- Industrialization(التطور الصناعي)
- Deforestation(قطع الأشجار من الغابات)
- Dams and canals

Examples: Malaria, Filariasis, Schistosomiasis, Bhopal gas tragedy, Chernobyl nuclear accident

Importance of ecology

- Ecological considerations should be built into planning of prevention of disease
- Important for control of diseases like malaria, filariasis, cholera, etc.

The greatest improvement in human health can be achieved through understanding environmental factors

Well being components

Objective (dealing with numbers): Standard of living/ Level of living

Standard of living مستوى المعيشة (WHO)

- ❑ The scale of our expenditure, the goods we consume, and the services we enjoy.
- ❑ comparison can be made using the per capita GNP (gross national product)

For example; what do you buy and how much would you spend on it?

- Income
- Occupation
- housing
- sanitation
- health
- nutrition
- education
- recreation and other service

Level of living (UN)

- ❑ Parallel term (almost the same meaning) used by the United Nations
- occupation
- housing
- food consumption
- health
- education
- social security
- clothing
- recreation and leisure
- human right

Subjective (opinions): Quality of life (WHO)

- ❑ A composite measure of physical, mental, and social well-being **as perceived** by each individual or by a group of individuals.

- ❑ Difficult to measure. Possible measures are the physical quality of life index (**PQLI**) and the Human development Index (**HDI**)

Factors that determine:

- health
- happiness
- education
- social and intellectual attainments
- freedom of action
- justice
- freedom of expression

Measures of Quality of Life:

	Physical Quality of Life Index (PQLI)	Human Development Index (HDI) كلما يزيد يشير الى حياة افضل
Indicators used in calculating this index	<ol style="list-style-type: none"> 1. Infant mortality 2. Life expectancy at 1yr 3. Literacy 	<ol style="list-style-type: none"> 1. Life expectancy at birth (longevity) 2. Mean years of schooling (knowledge) 3. Expected years of schooling (knowledge) 4. GNI, gross national income, per capita (income/ decent standard of living)
Scale	0 to 100 where 0 is worst performance and 100 is best performance	<ul style="list-style-type: none"> • Values from 0 to + 1 - HDI India is 0.554 (Rank 136 out of 186 countries) [2012] - HDI for KSA 0.847 Rank 38 (2018) • Human <i>poverty index</i> [HPI] is <i>complementary to HDI</i>
It measures	<ul style="list-style-type: none"> • The results of social, economic, and political policies. 	<i>It measures/reflects achievements in the most basic human capabilities</i>

- Does NOT measure economic growth

Both allow for national and international comparison

Estimation of HDI by New Method (2010 onwards)

• *Goalposts for HDI:*

Dimension value	Country	Maximum value	Minimum
Life expectancy	Japan	83.4	20.0
Mean years of schooling	Czech Republic	13.1	0
Expected years of schooling	Capped at	18.0	0
Combined education index	New Zealand	0.978	0
Per capita income (PPP \$)	Qatar	107,721	100

Calculation of each dimension index:

Actual value – Minimum value

= _____

Maximum value – Minimum value

- HDI is Geometric mean of 3 dimension indices = $I_{Life}^{1/3} \times I_{Education}^{1/3} \times I_{Income}^{1/3}$

Human Development Index [HDI] Vs Physical Quality of Life Index [PQLI]²

	HDI	PQLI
<i>Components</i>	1. Longevity – Life expectancy at birth (LE_b / LE_0) 2. Income (Real GDP per capita in PPP US\$) 3. Knowledge (Mean years of schooling – Gross enrolment ratio & Literacy rate)	1. Life expectancy at 1 year age (LE_1) 2. Infant mortality rate (IMR) 3. Literacy rate
Range	0 to +1	0 to 100
Value of India	0.554	65

Human Poverty Index

- HPI 1 and 2
- It measures 3 dimensions
 - A long and healthy life
 - Knowledge
 - A decent standard of living

Cultural Competence

Culture is the blended patterns of human behavior that include "language, thoughts, communications, actions, customs, beliefs, values, and institutions of racial, ethnic, religious, or social groups." *Cultural competence* is "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations." "Competence" in the term *cultural competence* implies that an individual or organization has the capacity to function effectively "within the context of the cultural beliefs, behaviors, and needs presented by consumers and their communities."

Determinants of Health

"Many factors combine together to affect the health of individuals and communities."

1. **Biological:** genetic predisposition
2. **Behavioral and socio-cultural:** cultural (eg: marrying cousins) and behavior patterns, lifelong habits developed from socialization (eg: smoking), lifestyle (eg: lack of physical activity, lack of sleep)
3. **Environment:** internal, external (macro-environment: things you're exposed to after conception.)
4. **Socio-economic:** this determinant encompasses
 - Economic status: per capita GNP **دخول الدولة** / Is it considered a high income or a low income country?
 - Education
 - Occupation
 - Political system

5. **Health services:** services for treatment of disease, prevention of illness and promotion of health.

To be effective, the health services must:

- reach the social periphery,
- equitably distributed *equity is where equality is truly reached*
- accessible at a cost the country and community can afford
- socially acceptable

6. **Aging** *but on a population level, for example is there a war or not?*

7. **Gender**

8. **Other:** information technology, health related systems like agriculture and food

where someone lives tells you about what they eat depending on whether or not they have access to it.

Factors that contribute to a person's current state of health. These factors may be **biological, socioeconomic, psychosocial, behavioral, or social in nature.** Scientists generally recognize five determinants of health of a population:

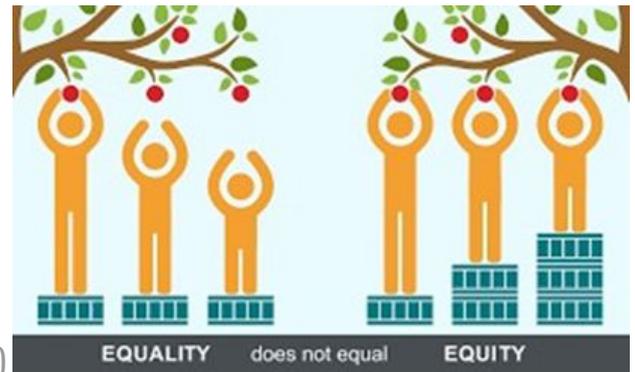
1. **Biology and genetics.** Examples: sex and age
2. **Individual behavior.** Examples: alcohol use, injection drug use (needles), unprotected sex, and smoking
3. **Social environment.** Examples: discrimination, income, and gender
4. **Physical environment.** Examples: where a person lives and crowding conditions
5. **Health services.** Examples: Access to quality health care and having or not having health insurance.

Health Disparity *تفاوت*

A type of difference in health that is closely linked with social or economic disadvantage. Health disparities negatively affect groups of people who have systematically **experienced greater social or economic obstacles to health.** These obstacles stem from characteristics historically **linked to discrimination or exclusion such as race or ethnicity, religion, socioeconomic status, gender, mental health, sexual orientation, or geographic location.** Other characteristics include cognitive, sensory, or physical disability .

Health Equity *الإنصاف*

When all people have **"the opportunity to 'attain their full health potential'** and no one is 'disadvantaged from achieving this potential because of their social position or other socially determined circumstance'

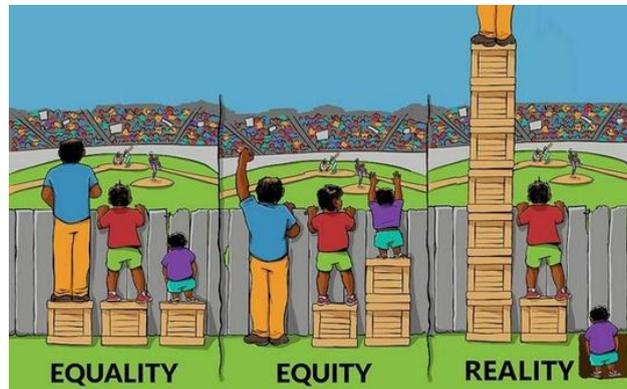


(مثل تأمين السيارة كل الناس معاها تأمين لكن بيدفعوا أسعار مختلفة على

حسب نوع السيارة ولما احد يسوي حادث كل واحد يُعوض على حسب نوع سيارته)

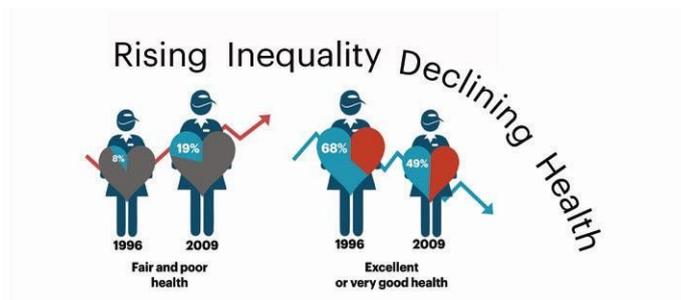
Health Inequality

Differences, variations, and disparities in the health achievements of individuals and groups of people .



Health Inequity

A difference or disparity in health outcomes that is systematic, avoidable, and unjust



Health Literacy

Whether a person can obtain, process, and **understand basic health information** and services that are needed to make suitable health decisions.

Health literacy includes the ability to understand instructions on prescription drug bottles, appointment cards, medical education brochures, doctor's directions, and consent forms. It also includes the ability to navigate complex health care systems. Health literacy is not

simply the ability to read. It requires a complex group of reading, listening, analytical, and decision-making skills and the ability to apply these skills to health situations

Index of Disparity

A **regression-based** measure that is used by scientists and retains the inherent order of categories like education or income but incorporates the population weights of the categories.

The size of each category is taken into account by placing the groups on an axis that reflects the cumulative proportion of the population represented by the ordered groups.

The index of disparity can be absolute (**slope referred to as Slope Index of Inequality**) or relative (**slope referred to as Relative Index of Inequality**)

Individual Risk Factor

Characteristics of a person that may explain health or behavior. Some examples include a person's age or whether a person smokes.

Poverty

When a person or group of people lack human needs because they cannot afford them. Human needs include clean water, nutrition, health care, education, clothing, and shelter.

The U.S. Social Security Administration originally developed the definitions that are used to help calculate and determine poverty.

Families or people with income below a certain limit are considered to be below the poverty level.

Social Determinants of Health

The **complex, integrated, and overlapping social structures** and **economic systems** that are responsible for most health inequities.

These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world .

Socioeconomic Gradient in Health درجة الميل

This term refers to the stepwise fashion health outcomes improve as socioeconomic position improves.

This gradient can be measured by a person's income, occupation, or the highest level of education he or she has .

Socioeconomic Position

An aggregate concept that includes both resource-based and prestige-based measures, which are linked to both childhood and adult social class position. Resource-based measures refer to material and social resources and assets, including income, wealth, and educational credentials.

Terms used to describe **inadequate resources** include "poverty" and "deprivation."

Prestige-based measures refer to a person's rank or status in a social hierarchy.

Prestige-based measures are typically evaluated with reference to people's **access** to and **consumption of goods, services, and knowledge**, that are linked to their occupational prestige, income, and education level .

Socioeconomic Status

A composite measure that typically incorporates economic, social, and work status.

- **Economic status** is measured by **income**.

- **Social status** is measured by **education**

- **work status** is measured by **occupation**.

Each status is considered an indicator. These three indicators are related but do not overlap .

The right to health

Historically, the right to health was one of the last to be proclaimed in the Constitutions of most countries

- Universal Declaration of Human Rights 1948: "**Everyone has the right to a standard of living adequate for the health and well-being of himself and his family** " .

- WHO Constitution introduction affirms that it is one of the fundamental rights of **every human being to enjoy "the highest attainable standard of health"**.

The right to health is the economic, social and cultural right to a universal **minimum standard of health** to which **all individuals are entitled**.

The concept of a right to health has been enumerated in **international**

agreements which include the Universal Declaration of Human Rights, International Covenant on Economic, Social and Cultural Rights and the Convention on the Rights of Persons with Disabilities.

There is debate on the interpretation and application of the right to health due to considerations such as how health is defined, what minimum entitlements are encompassed in a right to health, and which institutions are responsible for ensuring a right to health.

Health For All

- Decided by the 30th World Health Assembly in year 1977.

- They decided that the main social target of governments and WHO in the coming decades should be "**the attainment by all citizens of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life**"

Health For All is a programming goal of the **World Health Organization** (WHO), which envisions securing the health and well being of people around the world that has been popularized since the 1970s. It is the basis for the World Health Organization's **primary health care** strategy to **promote health**, human dignity, and enhanced quality of life.



Summary:

- **spectrum of health**: health is dynamic, phenomenon, Transition is often gradual, and where one state ends and another begins is a matter of judgment.
- **Ecology of health**: Human ecosystem includes (Natural environment, Man-made environment (physical, chemical, biological, psychological)), according to this concept, health seen as an equilibrium between man and his environment.
- **Importance of ecology**: should be built into **planning of prevention of disease, control of disease** like malaria, filariasis, cholera, etc.

- The greatest improvement in human health can be achieved through understanding environmental factors.
- **Objective:** Standard of living/ Level of living:
 - 1- **Standard of living:** Income- Occupation- housings- recreation -education
 - 2- **Level of living:** housing-food consumption -health-education- social security- clothing- recreation and leisure-human right
- **Subjective:** Quality of life: health -happiness education- social and intellectual attainments -freedom of action and expression- justice.
- **Physical Quality of Life Index (PQLI):** Infant mortality-Life expectancy at 1yr- Literacy.
- **Human Development Index (HDI)** (كلما يزيد يشير الى حياة افضل):
 - **HDI values range:** 0 to + 1
 - HDI India is 0.554 (Rank 136 out of 186 countries) [2012]
 - HDI for KSA 0.847 Rank 38 (2018)
 - **Human poverty index [HPI] is complementary to HDI.**
- Calculation of each dimension index:

$$= \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$
- HDI is Geometric mean of 3 dimension indices = $I_{\text{Life}}^{1/3} \times I_{\text{Education}}^{1/3} \times I_{\text{Income}}^{1/3}$
- **Cultural competence:** include "language, thoughts, communications, actions, customs, beliefs, values, and institutions of racial, ethnic, religious, or social groups."

It's "a set of congruent behaviors, attitudes, and policies that come together in a system. Someone's capacity to function effectively "within the context of the cultural beliefs...etc
- **Determinants of Health:** Factors that contribute to a person's current state of health. These factors may be biological, socioeconomic, psychosocial, behavioral, or social in nature such as: 1. Biology and genetics (sex& age) , 2. Individual behavior(unprotected sex, alcohol...) , 3. Social environment(income, gender...) , 4. Physical environment(where you live & crowding conditions) , 5. Health services (no health insurance,...)
- **Health Disparity** **تفاوت**: A type of difference in health that is closely linked with social or economic disadvantage. Negatively affect people who have systematically experienced greater social or economic obstacles to health. These obstacles stem from historically linked to discrimination or exclusion such as race or ethnicity, religion, socioeconomic status, gender, mental health, sexual orientation, or geographic location. - - **Health Equity:** When all people have the opportunity to 'attain their full health potential' and no one is disadvantaged because of their social determined circumstance.

- **Health Inequality**: Differences, variations, and disparities in the health achievements of individuals and groups of people
- **Health Inequity**: A difference or disparity in health outcomes that is systematic, avoidable, and unjust
- **Health Literacy**: understand basic health information. Health literacy includes the ability to understand instructions on prescription drug bottles, appointment cards, medical education brochures, doctor's directions, and consent forms. Ability of certain skills to be applied to health situations.
- **Index of Disparity**: regression-based measure. It's absolute (slope referred to as Slope Index of Inequality) or relative (slope referred to as Relative Index of Inequality)
- **Poverty**: Families or people with income below a certain limit are considered to be below the poverty level. U.S. Social Security Administration's definition.
- **Social Determinants of Health**: Complex, integrated, overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social and physical environment, health services... it's shaped by distribution of money, power, and resources through local communities, nations, and the globe.
- **Socioeconomic Position**: Resource-based measures refer to material and social resources and assets: income, wealth, and educational credentials. Prestige-based measures: reference to people's access to and consumption of goods, services, and knowledge; linked to their occupational prestige, income, and education level, both linked to childhood and adult social class position. Terms used to describe inadequate resources include "poverty" and "deprivation."
- **Socioeconomic Status**: Economic status is measured by income, Social status is measured by education, and work status is measured by occupation.
- **The right to health**: it's the economic, social and cultural right to a universal minimum standard of health to which all individuals are entitled. The concept is enumerated in international agreements which include the Universal Declaration of Human Rights, International Covenant on Economic...
- **Health For All**: programming goal of the (WHO), that envisions securing the health and well-being of people globally that has been popularized since 1970s. It's based on primary health care strategy to promote health, human dignity, and enhanced quality of life.



THE END