

"Health is NOT mainly an issue of doctors, social services and hospitals. It is an issue of social justice."

CONCEPT OF HEALTH

Health is a common theme in most cultures. In fact, all communities have their concepts of health, as part of their culture. Among definitions still used, probably the oldest is that health is the "absence of disease". In some cultures, health and harmony are considered equivalent, harmony being defined as "being at peace with the self, the community, god and cosmos". The ancient Indians and Greeks shared this concept and attributed disease to disturbances in bodily equilibrium of what they called "humors".

Modern medicine is often accused for its preoccupation with the study of disease, and neglect of the study of health. Consequently, our ignorance about health continues to be profound, as for example, the determinants of health are not yet clear; the current definitions of health are elusive; and there is no single yardstick for measuring health. There is thus a great scope for the study of the "epidemiology" of health.

However, during the past few decades, there has been a reawakening that health is a fundamental human right and a worldwide social goal; that it is essential to the satisfaction of basic human needs and to an improved quality of life; and, that it is to be attained by all people. In 1977, the 30th World Health Assembly 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", for brevity, called "Health for All" (1). With the adoption of health as an integral part of socio-economic development by the United Nations in 1979 (2), health, while being an end in itself, has also become a major instrument of overall socio-economic development and the creation of a new social order.

CHANGING CONCEPTS

An understanding of health is the basis of all health care. Health is not perceived the same way by all members of a community including various professional groups (e.g., biomedical scientists, social science specialists, health administrators, ecologists, etc) giving rise to confusion about the concept of health. In a world of continuous change, new concepts are bound to emerge based on new patterns of thought. Health has evolved over the centuries as a concept from an individual concern to a worldwide social goal and encompasses the whole quality of life. A brief account of the changing concepts of health is given below:

1. Biomedical concept

Traditionally, health has been viewed as an "absence of disease", and if one was free from disease, then the person

was considered healthy. This concept, known as the "biomedical concept" has the basis in the "germ theory of disease" which dominated medical thought at the turn of the 20th century. The medical profession viewed the human body as a machine, disease as a consequence of the breakdown of the machine and one of the doctor's task as repair of the machine (3). Thus health, in this narrow view, became the ultimate goal of medicine.

The criticism that is levelled against the biomedical concept is that it has minimized the role of the environmental, social, psychological and cultural determinants of health. The biomedical model, for all its spectacular success in treating disease, was found inadequate to solve some of the major health problems of mankind (e.g., malnutrition, chronic diseases, accidents, drug abuse, mental illness, environmental pollution, population explosion) by elaborating the medical technologies. Developments in medical and social sciences led to the conclusion that the biomedical concept of health was inadequate.

2. Ecological concept

Deficiencies in the biomedical concept gave rise to other concepts. The ecologists put forward an attractive hypothesis which viewed health as a dynamic equilibrium between man and his environment, and disease a maladjustment of the human organism to environment. Dubos (4) defined health saying: "Health implies the relative absence of pain and discomfort and a continuous adaptation and adjustment to the environment to ensure optimal function". Human, ecological and cultural adaptations do determine not only the occurrence of disease but also the availability of food and the population explosion. The ecological concept raises two issues, viz. imperfect man and imperfect environment. History argues strongly that improvement in human adaptation to natural environments can lead to longer life expectancies and a better quality of life – even in the absence of modern health delivery services (5).

3. Psychosocial concept

Contemporary developments in social sciences revealed that health is not only a biomedical phenomenon, but one which is influenced by social, psychological, cultural, economic and political factors of the people concerned (5). These factors must be taken into consideration in defining and measuring health. Thus health is both a biological and social phenomenon.

4. Holistic concept

The holistic model is a synthesis of all the above concepts. It recognizes the strength of social, economic, political and environmental influences on health. It has been variously described as a unified or multidimensional process involving the well-being of the whole person in the context of his environment. This view corresponds to the view held by the ancients that health implies a sound mind, in a sound body, in a sound family, in a sound environment. The holistic approach implies that all sectors of society have an effect on health, in particular, agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors (6). The emphasis is on the promotion and protection of health.

DEFINITION OF HEALTH

"Health" is one of those terms which most people find it difficult to define, although they are confident of its meaning. Therefore, many definitions of health have been offered from time to time.

WHO definition

The widely accepted definition of health is that given by the World Health Organization (1948) in the preamble to its constitution, which is as follows :

"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" (6).

The WHO definition of health has been criticized as being too broad. Some argue that health cannot be defined as a "state" at all, but must be seen as a process of continuous adjustment to the changing demands of living and of the changing meanings we give to life. It is a dynamic concept. It helps people live well, work well and enjoy themselves.

In spite of the above limitations, the concept of health as defined by WHO is broad and positive in its implications; it sets out the standard, the standard of "positive" health. It symbolizes the aspirations of people and represents an overall objective or goal towards which nations should strive.

Operational definition of health

The WHO definition of health is not an "operational" definition, i.e., it does not lend itself to direct measurement. Studies of epidemiology of health have been hampered because of our inability to measure health and well-being directly. In this connection an "operational definition" has been devised by a WHO study group (7). In this definition, the concept of health is viewed as being of two orders. In a broad sense, health can be seen as "a condition or quality of the human organism expressing the adequate functioning of the organism in given conditions, genetic or environmental".

In a narrow sense – one more useful for measuring purposes – health means: (a) there is no obvious evidence of disease, and that a person is functioning normally, i.e., conforming within normal limits of variation to the standards of health criteria generally accepted for one's age, sex, community, and geographic region; and (b) the several organs of the body are functioning adequately in themselves and in relation to one another, which implies a kind of equilibrium or homeostasis – a condition relatively stable

but which may vary as human beings adapt to internal and external stimuli.

New philosophy of health

In recent years, we have acquired a new philosophy of health, which may be stated as below :

- health is a fundamental human right
- health is the essence of productive life, and not the result of ever increasing expenditure on medical care
- health is intersectoral
- health is an integral part of development
- health is central to the concept of quality of life
- health involves individuals, state and international responsibility
- health and its maintenance is a major social investment
- health is a worldwide social goal.

DIMENSIONS OF HEALTH

Health is multidimensional. The WHO definition envisages three specific dimensions – the physical, the mental and the social. Many more may be cited, viz. spiritual, emotional, vocational and political dimensions. As the knowledge base grows, the list may be expanding. Although these dimensions function and interact with one another, each has its own nature, and for descriptive purposes will be treated separately.

1. Physical dimension

The physical dimension of health is probably the easiest to understand. The state of physical health implies the notion of "perfect functioning" of the body. It conceptualizes health biologically as a state in which every cell and every organ is functioning at optimum capacity and in perfect harmony with the rest of the body. However, the term "optimum" is not definable.

The signs of physical health in an individual are: "a good complexion, a clean skin, bright eyes, lustrous hair with a body well clothed with firm flesh, not too fat, a sweet breath, a good appetite, sound sleep, regular activity of bowels and bladder and smooth, easy, coordinated bodily movements. All the organs of the body are of unexceptional size and function normally; all the special senses are intact; the resting pulse rate, blood pressure and exercise tolerance are all within the range of "normality" for the individual's age and sex. In the young and growing individual there is a steady gain in weight and in the future this weight remains more or less constant at a point about 5 lbs (2.3 kg) more or less than the individual's weight at the age of 25 years (8). This state of normality has fairly wide limits. These limits are set by observation of a large number of "normal" people, who are free from evident disease.

Evaluation of physical health

Modern medicine has evolved tools and techniques which may be used in various combinations for the assessment of physical health. They include :

- self assessment of overall health
- inquiry into symptoms of ill-health and risk factors
- inquiry into medications
- inquiry into levels of activity (e.g., number of days of restricted activity within a specified time, degree of fitness)

7. Others

A few other dimensions have also been suggested such as (15):

- philosophical dimension
- cultural dimension
- socio-economic dimension
- environmental dimension
- educational dimension
- nutritional dimension
- curative dimension
- preventive dimension.

A glance at the above dimensions shows that there are many "non-medical" dimensions of health, e.g., social, cultural, educational, etc. These symbolize a huge range of factors to which other sectors besides health must contribute if all people are indeed to attain a level of health that will permit them to lead a socially and economically productive life.

POSITIVE HEALTH

Health in the broad sense of the world does not merely mean the absence of disease or provision of diagnostic, curative and preventive services. It also includes as embodied in the WHO definition, a state of physical, mental and social well-being. The harmonious balance of this state of the human individual integrated into his environment, constitutes health, as defined by WHO.

The state of positive health implies the notion of "perfect functioning" of the body and mind. It conceptualizes health **biologically**, as a state in which every cell and every organ is functioning at optimum capacity and in perfect harmony with the rest of the body; **psychologically**, as a state in which the individual feels a sense of perfect well-being and of mastery over his environment, and **socially**, as a state in which the individual's capacities for participation in the social system are optimal (16). These ideas were widely ventilated some years ago but now appear slightly ridiculous (17).

Dubos (4) said, "The concept of perfect positive health cannot become a reality because man will never be so perfectly adapted to his environment that his life will not involve struggles, failures and sufferings". Positive health will, therefore, always remain a mirage, because everything in our life is subject to change. Health in this context has been described as a potentiality – the ability of an individual or a social group to modify himself or itself continually, in the face of changing conditions of life. In working for positive health the doctor and the community health expert are in the same position as the gardener or farmer faced with insects, moulds and weeds. Their work is never done (18).

A broader concept of health has been emerging – that of improving the quality of life of which health is an essential component. This at once brings to focus that positive health depends not only on medical action, but on all the other economic, cultural and social factors operating in the community.

HEALTH – A RELATIVE CONCEPT

An alternative approach to positive health conceptualizes health not as an ideal state, but as a biologically "normal" state, based on statistical averages (3). For example, a newborn baby in India weighs 2.8 kg on an average compared to 3.5 kg in the developed countries, and yet compares favourably in health. The height and weight

standards vary from country to country, and also between socio-economic groups. Many normal people show heart murmurs, enlarged tonsils and X-ray shadows in the chest and yet do not show signs of ill-health. Thus health is a relative concept (7) and health standards vary among cultures, social classes and age-groups. This implies that health in any society should be defined in terms of prevailing ecological conditions. That is, instead of setting universal health standards, each country will decide on its own norms for a given set of prevailing conditions and then look into ways to achieve that level (19).

CONCEPT OF WELL-BEING

The WHO definition of health introduces the concept of "well-being". The question then arises: what is meant by well-being? In point of fact, there is no satisfactory definition of the term "well-being" (8).

Psychologists have pointed out that the "well-being" of an individual or group of individuals have objective and subjective components. The objective components relate to such concerns as are generally known by the term "standard of living" or "level of living". The subjective component of well-being (as expressed by each individual) is referred to as "quality of life" (20). Let us consider these concepts separately.

1. Standard of living

The term "standard of living" refers to the usual scale of our expenditure, the goods we consume and the services we enjoy. It includes the level of education, employment status, food, dress, house, amusements and comforts of modern living (20).

A similar definition, corresponding to the above, was proposed by WHO: "Income and occupation, standards of housing, sanitation and nutrition, the level of provision of health, educational, recreational and other services may all be used individually as measures of socio-economic status, and collectively as an index of the "standard of living" (21).

There are vast inequalities in the standards of living of the people in different countries of the world. The extent of these differences are usually measured through the comparison of per capita GNP on which the standard of living primarily depends.

2. Level of living

The parallel term for standard of living used in United Nations documents is "level of living" (22). It consists of nine components: health, food consumption, education, occupation and working conditions, housing, social security, clothing, recreation and leisure, and human rights. These objective characteristics are believed to influence human well-being. It is considered that health is the most important component of the level of living because its impairment always means impairment of the level of living.

3. Quality of life

Much has been said and written on the quality of life in recent years. It is the "subjective" component of well-being. "Quality of life" was defined by WHO (23) as: "the condition of life resulting from the combination of the effects of the complete range of factors such as those determining health, happiness (including comfort in the physical environment and a satisfying occupation), education, social and intellectual attainments, freedom of action, justice and freedom of expression".

A recent definition of quality of life is as follows (20): "a composite measure of physical, mental and social well-being as **perceived** by each individual or by group of individuals - that is to say, happiness, satisfaction and gratification as it is experienced in such life concerns as health, marriage, family work, financial situation, educational opportunities, self-esteem, creativity, belongingness, and trust in others".

Thus, a distinction is drawn between the concept of "level of living" consisting of objective criteria and of "quality of life" comprising the individual's own subjective evaluation of these. The quality of life can be evaluated by assessing a person's subjective feelings of happiness or unhappiness about the various life concerns.

People are now demanding a better quality of life. Therefore, governments all over the world are increasingly concerned about improving the quality of life of their people by reducing morbidity and mortality, providing primary health care and enhancing physical, mental and social well-being. It is conceded that a rise in the standard of living of the people is not enough to achieve satisfaction or happiness. Improvement of quality of life must also be added, and this means increased emphasis on social policy and on reformulation of societal goals to make life more liveable for all.

Physical quality of life index (PQLI)

As things stand at present, this important concept of quality of life is difficult to define and even more difficult to measure. Various attempts have been made to reach one composite index from a number of health indicators. The "Physical quality of life index" is one such index. It consolidates three indicators, viz. infant mortality, life expectancy at age one, and literacy. These three components measure the results rather than inputs. As such they lend themselves to international and national comparison.

For each component, the performance of individual countries is placed on a scale of 0 to 100, where 0 represents an absolutely defined "worst" performance, and 100 represents an absolutely defined "best" performance. The composite index is calculated by averaging the three indicators, giving equal weight to each of them. The resulting PQLI thus also is scaled 0 to 100.

It may be mentioned that PQLI has not taken per capita GNP into consideration, showing thereby that "money is not everything". For example, the oil-rich countries of Middle

East with high per capita incomes have in fact not very high PQLIs. At the other extreme, Sri Lanka and Kerala state in India have low per capita incomes with high PQLIs. In short, PQLI does not measure economic growth; it measures the results of social, economic and political policies. It is intended to complement, not replace GNP (24). The ultimate objective is to attain a PQLI of 100.

Human Development Index (HDI) (25)

Human development index (HDI) is defined as "a composite index combining indicators representing three dimensions - longevity (life expectancy at birth); knowledge (mean years of schooling and expected years of schooling. Before the year 2009, the indicators used were adult literacy rate and gross enrolment ratio) and income (GNI per capita in purchasing power parity in US dollars)". Fig. 1 summarizes how the human development index is constructed.

Thus the concept of HDI reflects achievements in the most basic human capabilities, viz, leading a long life, being knowledgeable and enjoying a decent standard of living. Hence, these three variables have been chosen to represent those dimensions. The HDI is a more comprehensive measure than per capita income. Income is only a means to human development, not an end. Nor is it a sum total of human lives. Thus by focussing on areas beyond income and treating income as a proxy for a decent standard of living, the HDI provides a more comprehensive picture of human life than income does.

The HDI values range between 0 to 1. The HDI value for a country shows the distance that it has already travelled towards maximum possible value to 1, and also allows comparisons with other countries.

STEPS TO ESTIMATE THE HUMAN DEVELOPMENT INDEX (26)

There are two steps to calculating the HDI.

Step 1. Creating the dimension indices

Minimum and maximum values (goalposts) are set in order to transform the indicators into indices between 0 and 1. The maximums are the highest observed values in the time series (1980-2011). The minimum values can be appropriately conceived of as subsistence values. The minimum values are set at 20 years for expectancy, at 0 years for both education variables and at \$100 for per capita gross national income (GNI).

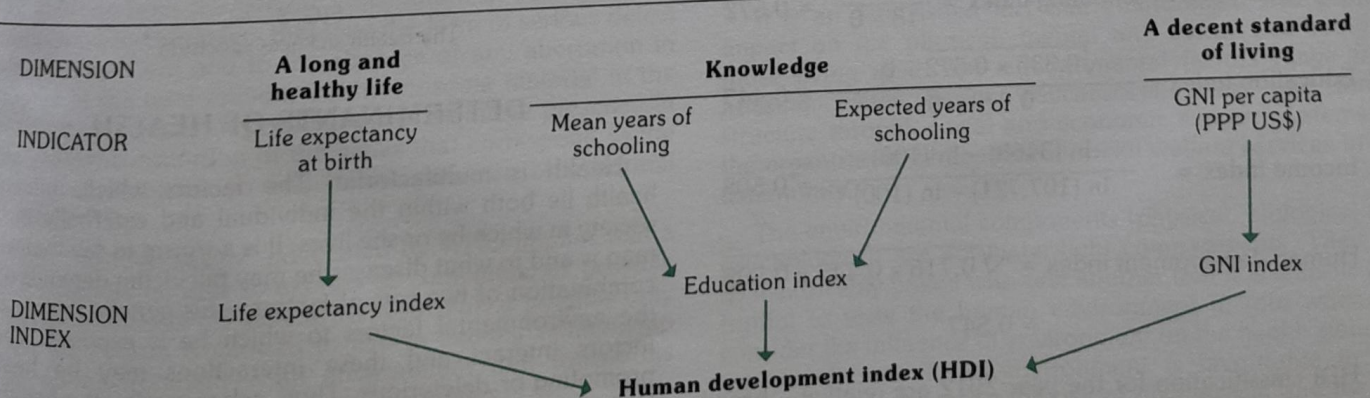


FIG. 1
Calculating the Human Development Index

- inquiry into use of medical services (e.g., the number of visits to a physician, number of hospitalizations) in the recent past
- standardized questionnaires for cardiovascular diseases
- standardized questionnaires for respiratory diseases
- clinical examination
- nutrition and dietary assessment, and
- biochemical and laboratory investigations.

At the community level, the state of health may be assessed by such indicators as death rate, infant mortality rate and expectation of life. Ideally, each piece of information should be individually useful and when combined should permit a more complete health profile of individuals and communities.

2. Mental dimension

Mental health is not mere absence of mental illness. Good mental health is the ability to respond to the many varied experiences of life with flexibility and a sense of purpose. More recently, mental health has been defined as "a state of balance between the individual and the surrounding world, a state of harmony between oneself and others, a coexistence between the realities of the self and that of other people and that of the environment" (9).

Some decades ago, the mind and body were considered independent entities. However, researchers have discovered that psychological factors can induce all kinds of illness, not simply mental ones. They include conditions such as essential hypertension, peptic ulcer and bronchial asthma. Some major mental illnesses such as depression and schizophrenia have a biological component. The underlying inference is that there is a behavioural, psychological or biological dysfunction and that the disturbance in the mental equilibrium is not merely in the relationship between the individual and the society (10).

Although mental health is an essential component of health, the scientific foundations of mental health are not yet clear. Therefore, we do not have precise tools to assess the state of mental health unlike physical health. Psychologists have mentioned the following characteristics as attributes of a mentally healthy person:

- a. a mentally healthy person is free from internal conflicts; he is not at "war" with himself.
- b. he is well-adjusted, i.e., he is able to get along well with others. He accepts criticism and is not easily upset.
- c. he searches for identity.
- d. he has a strong sense of self-esteem.
- e. he knows himself: his needs, problems and goals (this is known as self-actualization).
- f. he has good self-control-balances rationality and emotionality.
- g. he faces problems and tries to solve them intelligently, i.e., coping with stress and anxiety.

Assessment of mental health at the population level may be made by administering mental status questionnaires by trained interviewers. The most commonly used questionnaires seek to determine the presence and extent of "organic disease" and of symptoms that could indicate psychiatric disorder; some personal assessment of mental well-being is also made. The most basic decision to be made in assessing mental health is whether to assess mental functioning, i.e., the extent to which cognitive or affective

impairments impede role performance and subjective life quality, or psychiatric diagnosis (10).

One of the keys to good health is a positive mental health. Unfortunately, our knowledge about mental health is far from complete.

3. Social dimension

Social well-being implies harmony and integration within the individual, between each individual and other members of society and between individuals and the world in which they live (11). It has been defined as the "quantity and quality of an individual's interpersonal ties and the extent of involvement with the community" (12).

The social dimension of health includes the levels of social skills one possesses, social functioning and the ability to see oneself as a member of a larger society. In general, social health takes into account that every individual is part of a family and of wider community and focuses on social and economic conditions and well-being of the "whole person" in the context of his social network. Social health is rooted in "positive material environment" (focussing on financial and residential matters), and "positive human environment" which is concerned with the social network of the individual (10).

4. Spiritual dimension

Proponents of holistic health believe that the time has come to give serious consideration to the spiritual dimension and to the role this plays in health and disease. Spiritual health in this context, refers to that part of the individual which reaches out and strives for meaning and purpose in life. It is the intangible "something" that transcends physiology and psychology. As a relatively new concept, it seems to defy concrete definition. It includes integrity, principles and ethics, the purpose in life, commitment to some higher being and belief in concepts that are not subject to "state of the art" explanation (13).

5. Emotional dimension

Historically the mental and emotional dimensions have been seen as one element or as two closely related elements. However, as more research becomes available a definite difference is emerging. Mental health can be seen as "knowing" or "cognition" while emotional health relates to "feeling". Experts in psychobiology have been relatively successful in isolating these two separate dimensions. With this new data, the mental and emotional aspects of humanness may have to be viewed as two separate dimensions of human health (13).

6. Vocational dimension

The vocational aspect of life is a new dimension. It is part of human existence. When work is fully adapted to human goals, capacities and limitations, work often plays a role in promoting both physical and mental health. Physical work is usually associated with an improvement in physical capacity, while goal achievement and self-realization in work are a source of satisfaction and enhanced self-esteem (14).

The importance of this dimension is exposed when individuals suddenly lose their jobs or are faced with mandatory retirement. For many individuals, the vocational dimension may be merely a source of income. To others, this dimension represents the culmination of the efforts of other dimensions as they function together to produce what the individual considers life "success" (13).