
HUMAN HEALTH EVALUATION BY SCIENTIFIC INDICATORS

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Abstract

Human health is the most important asset an individual can own. It is an important dimension to the quality of life and can be seen from at least three different perspectives: from its negative traits, it can be defined as the absence of disease (in this case, health indicators are data on mortality, morbidity and life expectancy), it can be considered as a good adaptation of the individual to his environment and as a proper functioning in this environment (in this case, the indicators focus on consequences: inconvenience caused by disease, functional disability, disability and/or social disadvantage) or it can be defined in the way it is considered by the WHO documents, in a positive way (as a physical, mental and social wellbeing), thus becoming a value.

Keywords: human health, scientific methodology, health indicators

1. Introduction

Health is a fundamental resource for individuals, communities and society as a whole. Enjoying good health is for the individual of primordial importance. At the same time, a generally good health level is vital for growth and development of economy and of companies. W.H.O. defines health not only as a mere absence of disease and infirmity, but as a general 'wellbeing': on the physical, mental and social level [1-3].

Health can be defined as a possibility for harmonious adaptation to a complex environment. Thus, disease appears as an antithesis, as an inability to adapt to the numerous environmental conditions: from a social perspective, it can be seen as inadequacy in the social environment, health being an expression

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of well-being in social terms. Man needs therefore be regarded as a social being - a biological, economic, cultural, social entity - the right to health, being an indestructible part of social justice [1-4].

Regarding the health of a society, the concept is defined as the need for equal opportunities concerning health. It is impossible to be healthy in a sick society that does not provide resources for the basic physical and emotional needs [1-4].

2. Significance of human health assessment

Health assessment assumes a special importance within the complexity of economy and human social life. It is related to the growth and diversification of the factors, which amplify the complexity of life, and these factors originate from all fields. On one hand human health is the expression of an amassed environment that integrates all factors of influence, while on the other hand it is the subsequent condition of evolution within the complexity of our world [1-4].

As an expression of the world we live in, health is under direct and indirect influence of circumstantial factors, which in turn affect the intricate health phenomenon. We may integrate the following conditions in the category of health influencing circumstances: conditions related to education, work-related conditions, conditions related to income, conditions of consumption, housing conditions and conditions to an existence within a community [1-4].

Each of these conditions is mirrored in different aspects regarding human health and can have a positive or negative impact on its evolution. For example, conditions relating to education, characterized in the form of indicators reveal that an educated population is likely to choose the risk factors and thus to protect health. A poorly educated or uneducated population will always be under the influence of all risk factors that will determine health [1-3].

Although no direct correlation between education and health has been determined, scientific data points out that such a correlation exists, the only problem being how close it is from a statistical point of view, especially in terms of causes that generate various diseases and illnesses [1, 2].

The influence of work conditions are connected to health, in terms of labour effort in a certain timeframe and the factors that influence this effort, having consequences on accidents, illness and other health related issues [1-4].

If we consider that the labour imperative requires people to be engaged, for a good period of time after leaving school, then the existence of favourable conditions of work may be a prerequisite for maintaining health, as the existence of unfavourable work conditions may be factors for the worsening of health. That is why knowing the working conditions is an essential requirement for understanding the causes of various diseases, including the ones related to social stress [1, 2, 5, 6].

Closely related to these requirements, working conditions are regulated in different countries of the world in the form of standards to be respected by businesses. Of course, if we consider the existence of the underground economy

and illegal employment, in alarming proportions within different countries, it is difficult to follow, if these conditions are respected or not. Hence, in our opinion it is essential, not only to have thoughtful rules on working conditions, but also to respect them so that they do not exist only on paper [1, 2, 4-7].

Two pressure types affect this correlation: one that comes from those seeking work and who then accept this work, and another coming from economic agents who by pursuing their profit maximization, often violate labour standards, even if they are regulated. Between these two pressures, there must be state institutions that draw up working conditions and intervene whenever these are not respected [1, 2, 5-7].

The third condition refers to labour income, which is an expression of the contribution – remuneration correlation. Based on these conditions, which are a prerequisite for health, we must stress that the influences that appear are primarily related to the minimum level of the aforementioned income [1, 2].

There is of course a theoretical argument based on an economic principle, according to which any income earned by working must have a real coverage in the form of goods and services created by that particular activity. Such a correlation is important both for the employer who is the payer of the income and for the employee, meaning that nominal income must transform into real income, thus contributing to improving life [1, 2, 4].

There are therefore two interpretations regarding the minimum wages [1, 2, 4, 6, 7].

- a) The first linking revenue to productivity, to the labour contribution within which it is believed that there should be no minimum wage. The amounts may increase or decrease based on productivity.
- b) The second considers that minimum wage should be regulated by the Government and that the income should ensure a decent living in every stage as to not endanger the health of the employees. Minimum wage is thus independent of worker productivity. It should be estimated by the three powers (government, unions and employers) regarding the goods and services for which the minimum wage is established. The companies are to meet the required minimum.

These points of view prove that we are between a strong liberal conception in which man can win, depending on the actual contribution and a controlling conception, according to which the minimum should be regulated institutionally and not left to the free will of the economic agents [1, 2].

Each of these approaches has good parts and parts that are less good. We believe that its enforcement should be established, based on a complexity of economic, social, traditional, cultural, political factors, etc., which influence both the behaviour of people during work and the efficiency of their labour [1, 2]. For example, should an employer be required to pay minimum wage, but the employee's contribution would be under this minimum - that particular firm would generate serious negative outputs. Even under application of a minimum institutional wage, coverage of the income through productivity is vital both for the worker and for the employer.

Following the flow of revenues from the perspective of health, it is only natural that we interpret the conditions of consumption, the way in which these influence the lives of the people and the lives of the families these people are a part of.

The conditions of consumption describe the relationship between the needs of the consumer and the concrete possibilities of actually covering them. By its structure, population consumption affects health due to the existence of organic ties in this sense. These show that some consumption structures are favourable to health, while others are not [1, 2].

On what these consumption structures depend on? In our opinion, they are the result of several factors, among which we would like to point out [1, 2]: population income, traditions, offer on the consumer goods market and its structure, education, production prices and consumer goods, created image and ways the consumption of goods and services are handled, religious factor, natural conditions, and urban and rural areas, in which people live.

The order of these factors influences a specific type of consumption, with direct repercussions on the health of people. Every consumer consumption structure should, of course be modelled in a healthy direction, but this modelling process is complex and can have positive effects if the economic factors could stimulate the educational factors, meaning that people have the necessary income to their average daily consumption structure, guiding it by the sound principles they have already assimilated. It is however, determined that a healthy consumption is financially more difficult to realize than an unhealthy one (at least for us). Healthy consumption requires much bigger income, because environmentally friendly goods are more expensive. The consumption structure is under these circumstances restricted, in lesser-developed countries, by the 'unhealthy' wages, which also happens in Romania for a great part of the population [1, 2].

Therefore, the conditions of consumption as a factor involved in the health of the population are affected by the conjugated and often contradictory influence of the education regarding healthy consumption and the income, which prevents this healthy consumption. The economic factor eventually plays a highly important role, which when fulfilled creates the conditions under which all other educational, religious, cultural, social factors become favourable. For this reason, when analyzing the relationship between average consumption trends in different goods and services, and the health of the population, their interpretation must follow the real causes of a certain type of consumption. Without understanding the causes, only fighting the effects cannot bring much improvement with any institutional character [1, 2].

In terms of housing conditions, we would like to point out that these are directly relate to the health of the population, if we think that living together means to live in certain areas that are favourable to the imperatives of human life [1, 2]. This is why the conditions concerning the endowment of houses with everything necessary create the prerequisites for improving health, as their absence may worsen health. Analyzing the housing conditions is even more

important, if we regard the issues in two areas, urban and rural, where differences may be evident to one side or another, affecting the health of the population. It is also true that housing, just like consumption depends on the economic power of the individuals, on their capacity of acquiring everything necessary. The real existence of these capacities means good housing and consumption conditions, while the absence of the conditions causes negative consequences on population health [1, 2, 4-7].

Thus, the economy leaves its mark on health premises, conditioning them not only by income and prices, but also by the structure of the goods on the market – all being elements that influence human health [1, 2].

The analysis of these conditions should also reach the interpretations of man as a social being. From this perspective, human health is influenced by social conditions that leave their mark on poverty, welfare, security within a community, etc. In fact, life conditions within a society bears the mark of employment, income and costs of living, which in their unity may lead to a greater or smaller degree of poverty, an adequate social protection or suffering, an adequate security regarding life or its absence [1, 2, 4-7].

Poverty relates to health in the sense that, when it is extreme or when a large population is involved it deprives individuals of the minimum life conditions, which makes fighting to survive even more difficult to accomplish. This is the reason why, in our opinion, indicators from the category of life, poverty and social protection can be also analyzed from the point of view of health. In relation to social protection, economics faces two views [1, 2, 5-7]:

- The first one states that every individual needs to protect himself, meaning that he should lead his life according to the rules he desires to follow;
- The second one states, that in the cases in which poverty has exceeded an acceptable limit it is necessary to protect those who suffer.

It is said that there are over 2.5 billion people in the world, who suffer from poverty, while in many countries this social phenomenon reached extreme limits. Of course, as long as the poverty phenomenon is present, regardless of its form, the issue of protecting those who suffer will also exist and it needs be accomplished. As an element of substance, we nevertheless need to find the causes of things and it seems that the development of human freedoms based on assuming responsibilities represents the ultimate solution when fighting this social phenomenon.

By analyzing these conditions that influence population health, not only can we find the characteristic direct and indirect influences, but also the causes that explain why there happens what happens.

Health evaluation is not a purpose in itself, but a means to understand the causes that contribute to the worsening of others. Therefore, the problem of health assessment is important, not only in terms of human individuals, but also from the point of view of those who ensure the management of government, in the sense that the adopted policies and measures will not adversely affect human health [1, 2, 4].

In our opinion human health assessment is currently accomplished not only by specific indicators related to health, as consumer goods, but also by indicators that reflect the aforementioned premises and conditions. The analysis of each indicator bears the advantage that it guides the research towards concrete elements, where the cause and effect correlation may be adequately interpreted. Such an analysis has at the same time the advantage of permitting the substantiating of specific measures, which become highly efficient if they affect the causes of the events. We think that we need to go further regarding this situation and aggregate these partial indicators into a global indicator, which we took the liberty to name an ‘index of population health’ or an ‘index of population health condition or health situation’ [1, 2].

This indicator, as any other aggregate indicator has its advantages and disadvantages. This could provide nevertheless an interpretation of the countries of the world, not by human development index, nor by the index of economic freedom, but by an indicator which reflects man’s most valuable asset – ‘health’ [1, 2].

For this interpretation to be a success, it is necessary that all chosen partial indicators, which are to be combined, to adequately reflect the relationship with human health, so that after their aggregation to result in a significant composite index in assessing human health [1, 4-7].

3. Conclusions

Based on these elements for calculating ‘the population health situation’ we consider that starting with following partial indicators would be beneficial [1, 2, 4]:

A. POPULATION

1. Average lifespan,
2. Natural growth – rate (per 1000 inhabitants),
3. Live births – rate (per 1000 inhabitants),
4. Deaths – rate (per 1000 inhabitants),
5. Still births – per 1000 newborns,
6. Deaths under 1 year old – per 1000 newborns,
7. General fertility rate,
8. Mortality rate,
9. Infant mortality rate,
10. Demographic dependency ratio (%)

B. HEALTH

11. Number of beds in health facilities – per 1000 inhabitants,
12. Population assigned to a doctor – per 10 000 inhabitants,
13. Population assigned to a medium health setting– per 10 000 inhabitants,
14. Beds in hospitals – per 1000 inhabitants,
15. Average alcohol consumption – litres/inhabitant,
16. Average daily calorie intake/inhabitant,
17. Average daily protein intake/inhabitant,

18. Number of cases suffering of AIDS,
 19. Public expenditure on health (% GDP),
- C. EDUCATION
20. School enrolment rate (% in education),
 21. Number of students – per teacher,
 22. Public expenditure on education (% GDP),
- D. GENERAL ECONOMIC FRAMEWORK
23. Share of the working population in the total population,
 24. Unemployment rate,
 25. Real average pension indices,
 26. The average annual inflation,
 27. GDP index/inhabitant.

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