

Sanitation & Health

Dr Nalin Abeysinghe

It is observed that when compared with the past, allopathic medicine has advanced substantially. Most of the time these developments are attributed to the latest inventions in diagnostic and treatment aspects of medicine. Yet the subjective sentiment of a healthy life or to be healthy or in other words the personal attitudes in relation to health are far behind these advances. Although the knowledge about diseases and their causation were well understood, the concept of health has not been adequately conveyed to people. Sanitation being a gateway to health, possesses a higher rank in the list that need to be addressed to improve the wellbeing of a community.

World Health Organization (WHO) defines Health as a state of complete physical, mental and social wellbeing and not merely absence of disease or infirmity. In simple terms, this means that health is not a mere absence of disease. It is assumed that one can understand what is meant by physical wellbeing. It may be said that a person is physically well off if his bodily organs are functioning optimally with the absence of any evidence of disease. If one cannot live in harmony with other people, does it reflect one's health? Further, if one is not educated adequately nor experienced or skilled in any kind of manual or non-manual work, and therefore does not possess sustained capacity to earn, do you think that person is well? Well, up to now I have tried to



Faecal contamination of water is an important cause of ill health. Improving sanitation is a priority

arouse your curiosity on the broad concept called health in relation to its physical, mental and social aspects.

From the above discussion, it is clear that health is a state for which one should strive. Although most of us are born healthy we lose it more or less with time due to our unhealthy life style. Sanitation is one of the important factors that determine health.

According to the World Health Organization (WHO), sanitation refers to the provision of facilities and services for the safe disposal of human urine and faeces. The word also implies the maintenance of hygienic conditions through services such as garbage collection

and wastewater disposal. Although this statement may imply that sanitation need to be provided, which to some extent is true, the real responsibility lies with the people experiencing the consequences of both poor and good sanitation.

In Sri Lanka, the proportion of the population having sustainable access to safe drinking water was 86% in 2006. In India this value is nearly three times lower than ours (28%). In Bangladesh this value is 36% while all the developed countries are close to 100%. Proportion of Sri Lankan population with access to improved sanitation was 80% in 2001.

Sanitation comprise several services provided to improve public health. Among these services, provision of safe

water, provision of safe food, planned wastewater management, and disposal of human excreta and garbage play a major role. Most countries around the world have enacted legislative measures to ensure the quality of these services provided to their people. According to the WHO, 40% (2.4 billion) of the 6 billion people in the world possess no acceptable means of sanitation.

Water and sanitation go hand in hand. Good sanitation is not possible where adequate supply of water and proper management of water are not in place. Most of the sanitary facilities are based on the manipulation of water. Hence the authorities concerned as well as individuals should take the necessary precautions to ensure the provision of safe water for drinking and food preparation, prevention of infections due to water-related vectors (e.g. Dengue, Malaria) and water-borne infections (e.g. Typhoid, hepatitis and cholera), and also to ensure the proper management of water for irrigation (45% of the world's food production comes from irrigated agriculture), in order to sustain an equilibrium in the global ecosystems. Diarrhea is the most important public health problem directly related not only to water, but also to sanitation. Are you aware that there are 2.2 million deaths around the world due to diarrhoea and 90% of these victims are children under 5 years of age? What is the solution for this global problem? One simple step is washing hands with soap and water before taking meals and after using the latrine. Very simple, isn't it? Well, recent studies have revealed that washing hands with soap and water can reduce diarrhoea by 35% (that means one-third of diarrhoeas can be prevented saving the life of 500,000 people!). Chlorination of water, legislative enactments and enforcement for the disposal of wastewater and human excreta, destroying of mosquito breeding sites, etc... all of which contribute to the manipulation of water to ensure sanitation.

Water which plays the central role in sanitation, food sanitation, waste and wastewater management, disposal of human excreta and garbage are also

important with regard to maintaining sanitation. In relation to food sanitation, the government of Sri Lanka has taken adequate measures for the provision of safe food for the people. The Food Act No. 26 of 1980 is the key legislation governing food safety activities in Sri Lanka, and its provisions protect the consumer not only from utilizing unsafe food, but also from being misled by incorrect information provided by various manufacturers. WHO has proffered golden rules for safe food preparation, for example on the need to keep the raw and cooked food separately, cook food thoroughly, Keep food at safe temperatures, use safe water and raw materials. National Environmental Act (NEA) provides provisions on waste water disposal, ambient air quality standards and permissible noise levels. It is known that most of the factories discharge their industrial wastewater in to natural waters. NEA has issued standards for the quality of this discharged wastewater, so as to ensure that the natural equilibrium, and biodiversity of these natural water resources are not disturbed. Hospital waste management is by far the most important in preventing severe infections. Disposal of human excreta (urine and faeces) should be done meticulously. Intentional or unintentional disposal of human excreta into natural water sources is a major health hazard, bearing a potential risk of spreading waterborne infections like hepatitis, amoebiasis, typhoid, acute diarrhoeal illnesses, etc.

Concept of health is a broad topic that needs discussion. The gist of health has evolved over centuries being initiated as a concept of individual concern, and later becoming a world-wide social goal. How the concept of health had evolved is described below.

At the turn of the 20th century, health was viewed as 'absence of disease', and this was known as the 'biomedical concept'. This was founded by the 'germ theory of disease' which was well accepted in that era. Nevertheless this concept was found inadequate to solve some of the major health problems of mankind (e.g.



Using even small quantities of water effectively can improve hygiene and health

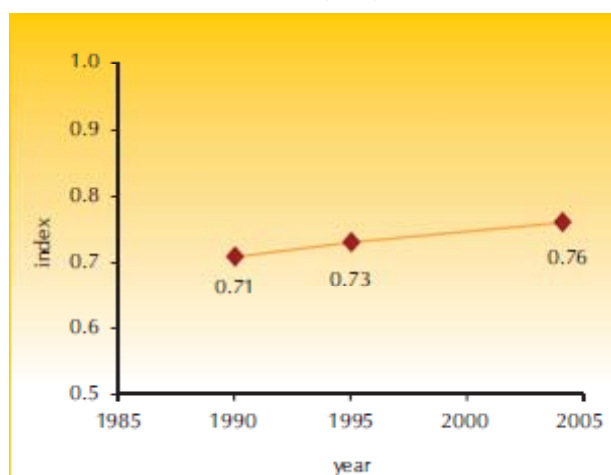
malnutrition, chronic diseases, accidents, drug abuse, mental illness, environmental pollution, population explosion etc.). These deficiencies in the biomedical concept paved the way for ecologists to put forward an attractive hypothesis which viewed health as a dynamic equilibrium between man and his environment, and disease was a maladjustment of human organism to the environment. With the contemporary developments in social sciences the ‘psychosocial concept’ was stipulated and thereafter the ‘holistic concept’ – the unified or multidimensional process described above (as the latest WHO definition of health) has been accepted, which implies that all sectors in a society have an effect on health.

As stated earlier Health can be viewed from several dimensions with special reference to human beings’ physical, mental and social aspects. Physical dimension 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. Various tools and techniques have been evolved to assess physical health – both individually (self assessment, clinical examination, biochemical and laboratory investigations), and at the community level (crude death rate, infant mortality rate and expectation of life). In the case of mental dimension of health, it should be understood that this is not mere absence of mental illness, but the ability to respond to a variety of experiences of life with flexibility and a sense of purpose. Mind and body are not independent entities as thought few decades back. It has been proven by modern research that psychological factors can induce all kinds of illnesses including hypertension, peptic ulcer and bronchial asthma. Social dimension of health describes the harmony and integration within the individual, between each individual and other members of society and between individual and the world in which they live. The next dimension though not described in the main context of health, is its spiritual component. It was proposed as a part of the concept

of holistic health and still defies a concrete definition due to its complexity. This is the part of a person that comes out and strives for meaning and purpose of life. In addition to these three main dimensions, certain other – previously not thought as dimensions of health were stipulated viz. emotional, vocational and political.

Consideration of the above conceptual framework, one may think it is a perfectionists who may have evolved this concept of health. This is because, if we take health as a spectrum as described above, perfectionism lies at the positive extremity of this spectrum (other end will obviously be death). Positive state of health remains a mirage in a context where everything changes, but it is a potentiality, and is based on one’s ability to modify him/herself continually in the face of changing conditions of life. The concept of relative health appears here, where health is described not as an ‘ideal’ state, but as a biologically ‘normal’ state. Therefore health will not remain as a universal standard, but will be defined by its own norms for a given set of prevailing conditions in a given community. In Sri Lanka a birth weight of 2.5 kg will be taken as normal, whereas in developed countries this value may be taken as low (in developed countries the normal birth weight averages around 3.0 kg). Hence, many biological normal ranges have been defined taking into considerations the various parameters determining normal health, where 95% of the normal population is included.

Increment of Sri Lanka’s Human Development Index (HDI)



Let’s move on to another important concept known as wellbeing that was introduced along with the WHO definition of health. Wellbeing comprises subjective and objective components. The objective component determines how outsiders determine one’s wellbeing, and this is described by the means of the standard/level of living. Standard of living refers to the usual scale of expenditure, the goods consumed and the services provided, and it also includes the status of

health, level of education, employment status, food, dress, house, amusement, social security, observance of human rights and provision of comforts of modern living. The standard of living primarily depends on the per capita GNP (Gross National Product) and this is used to compare the standard of living among countries. Subjective component of wellbeing is referred as 'quality of life' (QOL). I would like to describe this phase as the subjective evaluation of the concept of standard/level of living i.e. how an individual perceives his/her provisions of standard living. People are now demanding a better quality of life; hence governments all over the world are exerting their efforts to improve the QOL of their citizens by adopting various measures. As a result of attempts to measure QOL, several indicators are now being used, among which the Physical Quality of Life Index (PQLI) and Human Development Index (HDI) are widely recognized. HDI is used by WHO to rank the countries according to their health and socio-economic status. HDI is a composite indicator that uses longevity (life expectancy at birth), knowledge (adult literacy rate and mean years of schooling) and income (real GDP per capita in terms of purchasing power) into its account. According to HDI ranking, Sri Lanka was ranked at the 96th position out of 177 countries in 2002.

Sri Lanka provides a rare instance where her citizens are granted most of health services free of charge. Government expenditure on health is 4.2% of the Gross Domestic Product (GDP). World Health Organization (WHO), in its Country Health System Profiles states that as a result of the pursuance of the social welfare-oriented state policy over the last five decades, Sri Lanka has outstanding achievements in literacy and health status of its people. Sri Lanka's primary authority involved in providing, assessing and maintaining health is the Ministry of Healthcare and Nutrition. Ministry functions according to the National Health Policy declared in 1996, and we must be proud of our achievements in healthcare, which can be considered

pari passu with the well developed countries of the world. Government's health policy is aimed at increasing the life expectancy and improving the quality of life of the people by improving the preventive health sector, making healthcare more accessible to the community on an equitable basis, development and implementation of national drug policy, development and regulation of private healthcare sector, meeting the emerging health needs and several other provisions for the betterment of the island's healthcare system and its consumers –

the citizens. While the Ministry functions as the local authority for health, World Health Organization is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.

As I have mentioned in the early part of this article, sanitation is one of important factors that

determine one's health and is the more controllable factor in this regard. Readers should understand that sanitation only addresses the diseases that are infectious or communicable in nature, and therefore comprise only one aspect of health. It should however, be emphasized that maintenance of good sanitary practices will prevent a large number of morbidities and deaths due to infectious diseases. I would like to remind that very basic sanitary practices will make a great impact on preservation of health. May all of you be healthy!



The world health assembly. WHO's 193 member countries meet to decide policy for improving health



*Dr Nalin Abeysinghe
Faculty of Medical Sciences
University of Sri Jayewardenepura*