CHAPTER-I

INTRODUCTION

Development is the keyword of modern generation. Present age in general is thinking and living for development. Every human-being – irrespective of caste, color, creed, sex, religion, etc. – talks of development and also struggles for development. It is very late that we have started realizing the significance of human beings towards development process. However, it is never too late to mend; and now we are talking about the different perspectives of development.

Development may be conceived as a multidimensional process, involving major changes in social infrastructure, population attitude, acceleration of economic growth, the reduction of inequalities, eradication of absolute poverty, etc. (Todaro, 1981). Development implies progressive improvement in the living conditions of life enjoyed by society and shared by its members. Thus development must be woven around people rather than people around development; it should empower individuals and groups rather than to disempower them. Further, development co-operation should focus directly on people and not just on nation or state. “...Development, in its essence, must represent the entire amount of change by which an entire social system turned to diverse basic needs and desires of individuals and social groups within that system, moves away from a condition of life widely perceived as unsatisfactory and toward a situation or condition of life regarded as materially and spiritually better” (Todaro, 1993). According to the United Nations Expert Committee, “Development concerns not only with man’s material needs but also with the improvement of the social condition of his life. Development is, therefore, not only economic growth, but growth plus change – social, cultural and institutional as well as economic.” Thus economic development is a concept, embodying not just income and its growth, but also achievements on other fronts, reductions in infant mortality, higher life expectancy, and advances in literacy rate, wide-spread access to medicine and health services, and so on.

Humans are the most important and valuable resource of a nation. Healthy and active people can build dynamic nations through achievement of high rates of
economic growth. Competent and motivated people can contribute to the effectiveness of the nation to achieve the goals of full employment, economic security and social justice. In the terminology of Sen (1985), health contributes to a person’s basic capability to function – to choose the life she has reason to value. The process of economic development can be seen as a process of expanding the capabilities. Further, creating the right categories of human capabilities at the right place would help to achieve optimum utilization of human capabilities which are accumulated in the process of human development in the manpower.

According to UNDP (1990), human development is a process of enlarging people’s choices, including living a long and healthy life, to be educated and to have access to resources for a standard of living. Basically, human development implies the capacity to expand the range of choices which will enable people to improve the quality of their lives. Among the various components (like education, health, nutrition, housing, social security, human freedom, etc.) determining the levels of living or the quality of lives of peoples, the importance of health as a determinant of human development is well accepted. Health is high on the agenda of the government and the people, both of whom are willing to invest for improving health status. Spiraling costs and raising demand are putting a severe constraint on the health systems – whether government funded or private health care. Health care can absorb a very large quantity of investment from the government and individuals, yet leaves millions of people (especially the poor who suffer from a high disease burden) inadequately covered. It is also being increasingly realized that merely investing more in health is unlikely to improve the health status of the population. As to what is essentially required is that policies and strategies should be developed to promote equitable access to preventive and curative services, so that there is an improvement in health indices.

Human capital plays different roles in various theories of economic growth. In the neoclassical or traditional growth model (Solow, 1956), no special role is assigned to the capital in the production of output. In new economic growth theory, also known as endogenous growth theory and originated in the late eighties in the works of economists like Romer (1986) and Lucas (1988), human capital is assigned a more central role. The level of human capital may directly influence productivity by
determining the extent to which a nation can adapt new technology to its own production processes. A developing country with a well educated workforce may be able to catch up with advanced techniques much more quickly than another developing country, wherein the workforce is a laggard in education.

Aghion and Howitt (1998) observed that the role of human capital in endogeneous growth models can be divided into two broad categories. The first category broadens the concept of capital to include human capital. In these models, sustained growth is due to the accumulation of human capital over time (Uzawa, 1965; Lucas, 1988). The second category of models attributes growth to the existing stock of human capital which generated innovations (Romer, 1990) or improves a country’s ability to imitate and adapt new technology (Nelson and Phelps, 1966) which, in turn, leads to technological progress and sustained growth.

If the quality of human capital is not good, physical capital and natural resources cannot be properly utilized, and growth can neither be sustained nor be qualitative. Health is a major determinant of human capital. The level of health status of a person is a robust reflector of the state of development of the nation concerned. A nation with good health of its citizens tends to be productive and that productivity tends to uplift economic and social developments which, in turn, tend to improve the indicators of health status and quality of life. The health dimension of people and its significance in economics is highlighted by Marshall (1982).

When we speak of a developed society, we ideally picturize a society in which people are well-fed and well-clothed, possess access to a variety of commodities, have the luxury of some leisure and entertainment and live in a healthy environment. We think of a society free of violent discrimination, with tolerable levels of equality, where the sick receive proper medical care and people do not have to sleep on the sidewalks.

Health is very peculiar asset because unlike almost anything else (including even some other forms of human capital), it is almost entirely inalienable. The economic gains are relatively greater for poor people, who are typically most handicapped by ill-health and resources. Better health is not only a means to achieve development,
but an end as well. It also implies that poor health limits the productive capacity of the affected person, including his/her ability to enjoy good health.

As investment on health increases, productive capacity of the working population (and hence the level of income) tends to rise, thus resulting in a decline in the incidence of poverty. With rapid improvement in health (particularly of the poor), *vicious circle of poverty* can be converted into *virtuous circle of prosperity*. Although there has been a two-way relationship, a strong causal link from adult health to economic growth has been observed in many studies.

Good health is a significant component of human well-being. The improvement of health is also an essential element of socio-economic development. However, the association between health and economic development are complex. The interaction is a two-way phenomenon, with health being influenced by and influencing economic development (World Bank, 1999). In other words, health and socio-economic development are closely inter-related, and it is impossible to achieve one without the other. Health is a priority goal in its own right as well as central input into economic development and poverty reduction.

A well nourished, healthy, educated, skilled and alert labour force is the most important productive asset, and this has been widely recognized the world over. Health is not only a means to achieve economic development, but an end in itself. Poor health limits the productive capacity of the affected person including his ability to enjoy good health.

Health is multidimensional in character (some of the important dimensions being birth rate, death rate, infant mortality rate, life expectancy at birth, etc.); each dimension is influenced by numerous factors, such as life style, adequate housing, basic sanitation and socio-economic conditions including income, education, availability and quality of health infrastructure, per capita health expenditure. Besides, many of the factors which influence health are inconspicuous. Again, the factors which influence health lie within the individual and also externally in the society in which one lives. The widely accepted definition of health is given by World Health Organisation (1948) in the preamble to its constitution: “Health is a state of complete physical, mental and social well-being and not merely an absence
of disease or infirmity”. But, subsequently, the statement was amplified to include “the ability to lead a socially and economically productive life” (WHO, 1978). This definition is broad and positive in its implications; it sets out the standard of positive health, and represents an overall goal towards which the nations should strive. It envisages three specific dimensions: (a) the physical health (which implies functioning of every cell and organ at optimum capacity and in perfect harmony with rest of the body); (b) the mental health (which implies a state harmony between oneself and others, a coexistence between the realities of the self and that of the environment); and (c) social well-being (which implies quantity and quality of an individual’s interpersonal ties and the extent of improvement with the community).

As per World Development Report (1993), improving health contributes to economic growth in four ways: (i) it reduces the production losses, caused by worker’s illness; (ii) it permits the use of natural resources that become totally or nearly inaccessible because of diseases; (iii) it increases the enrollment of children in school and making them better able to learn; and (iv) it frees for alternative uses resources that would otherwise have to be spent on treating illness.

As pointed out by the World Health Organization (2000), “While health globally has steadily improved over the years, great numbers of people have seen little, if any, improvement at all. The gaps between the health status of rich and poor are at least as wide as they were half a century ago and are becoming wider still.”

People in a developed nation would expectedly enjoy a fairly high degree of physical quality of life and, that too, in a broadly uniform manner rather than in a manner restricted nearly to an affluent minority. The level of health expenditure is known to be affected by a nation’s health status via several path ways. Spending on health is a productive investment; it can raise incomes, particularly among the poor, and it reduces the toll of human suffering from ill health. Good health, however, is a fundamental goal of development as well as means of accelerating it. Targeting health as a part of development efforts is an effective way to improve welfare in low income countries.

Public policy on health is expected to be successful if it leads to increased welfare through better health outcomes, greater equity, more consumer satisfaction or lower
total cost. Investing in health of the poor is an economically efficient and politically acceptable strategy for reducing poverty and alleviating its consequences, as emphasized in World Development Report (1990).

The other important aspect of health is nutrition. Undoubtedly, the intake of nutritious food leads to better health conditions. Thus, nutrition also plays an important role in the country’s economic development. The government, especially in less developed economies, in co-operation with national, international and non-governmental organizations are now actively engaged in solving the nutritional problems. Broadly speaking, state and central governments have been following two approaches to fill nutritional gaps: the first approach is direct feeding programme for women and children. The second one lies in a network of fair price shops.

Raising the level of nutrition of the people is among the primary responsibilities of the state and has been specifically mentioned in Article 47 of the Constitution of India. It is now well known that nutrition plays an important role in physical efficiency of people.

Most of the diseases in developing economies are routed in undernutrition and the unhygienic living and working conditions associated with poverty. About 50 percent of childhood mortality in the third world is still caused by malnutrition (Doyal, 1979). Further, malnourishment may increase income inequality, lower social returns to educational expenditure, impede economic growth and increase unemployment (Das Gupta, 1982). The causes and effects of malnutrition can easily be understood by the arguments given by Sharpton (1976). According to him, poverty causes malnutrition, high fertility, poor social infrastructure (like poor water supply, sanitation and housing), and that malnutrition is both the cause and the effect of ill-health.

Poverty, malnutrition and inefficiency bear a close nexus in a perpetual manner. Low income is a cause of low consumption on nutritional intake. The low nutritional intake is cause of low productivity and efficiency. Finally, low productivity and efficiency is the cause of low income. This way, the vicious circle of poverty is completed and continues to be perpetuated. Similarly, low income parents consume less take to nutritional-value food, causing deficiency of carbohydrates, fats, proteins
and vitamins. Nutritional deficiency affects health, giving birth to weak babies. Low income and low nutrition value food cause deficiency of nutrition of babies and retard their growth, lead to deprivation of upward mobility and, in turn, perpetuate cycle of poverty.

It is, de facto, the quality of human health upon which the realization of life’s goals and objectives of a person, the community or the nation as a whole depend, which further depends upon adequate food and sound nutrition. Adequate food and sound nutrition are essential to good health. Not only are these crucial for human survival and key factors in the prevention and recovery from illness, but these are pre-requisites for improving the quality of life of individuals. The element of nutrition can influence a broad spectrum of health concerns with supply of safe and quality food. In fact, in all phases of life cycle – from preconception to death – nutrition plays a vital role. Today, there is growing concern at all levels of the government, the scientific community, and the public about the role of nutrition in human health and greater recognition of the opportunities for enhancing the national health through improved nutrition.

Health and Nutrition have long-run effects on productivity and output because they influence a child’s ability and motivation to learn. Disease and malnutrition in infancy may retard mental development and illness, and temporary hunger may reduce children’s ability to concentrate (World Bank, 1995). So, it is not difficult to imagine that healthier people tend to be fit, stronger, and more energetic than unhealthy individuals, so that time spend on the job by the former is more productive. There is, thus, expected to be direct inter-linkages between health status, longevity and level of development.

Better health and nutrition are positively associated with gains in schooling in many areas: enrollment at younger ages, less grade repetition, less absenteeism, more grades completed and better performance on test scores. A number of empirical studies have provided strong evidence that health and nutrition influence children’s success in school (Leslie and Jamison, 1990; Levinger, 1992; Myers, 1992; Pollitt, 1990).
Clearly the solution to health problems created by malnutrition is supply of adequate food along with creation of purchasing power. Malnutrition is ultimately routed in poverty and that *ad-hoc* feeding programmes cannot solve it. Since nearly eighty percent of worlds’ total population lives in rural areas and more than seventy five percent of them who live in the developing countries, have little or no access to modern medical and health care facilities (Swami, 1975); therefore, a long-lasting solution lies in socio-economic measures which are seemingly unrelated to nutrition. Rural electrification, better transport facilities, housing and improvements in environmental sanitation, rather than the expensive feeding programmes, can uplift the nutritional status of the poor (Gopalan, 1970).

This means, in particular, that development lies also in the removal of poverty and under-nutrition; in a reduction of infant mortality rate; in an increase in life expectancy; and in an enhanced access to sanitation, clean drinking water and health services.

**Orientation of the Present Study:**

The above discussion points towards the widely recognized fact world over that a well nourished and healthy society is the most important productive asset of a nation. Improvement in health and nutrition are essential elements of human resource development. Good health and adequate nutrition can help in lowering of absenteeism rate of children in schools; enhancing their intelligence level; promoting morale and productivity potential of labour force; increasing capability and inducing positive attitude towards life and leadership qualities, conducive for economic growth and modernisation, *etc.* We should not look at health and nutrition merely as a means of economic development; what is more important is to view economic development as contributing to the betterment of health and nutritional intake of people. Besides, provision of adequate health infrastructure can transform many uninhabitable areas fit for settlement and, thus, can help in the exploitation of idle resources of those areas.

The Indian sub-continent with its large size and wide structural and economic variations is better understood and better interpreted when studied at regional level, which narrows down the variability and thus enables better identification of the
special characteristics. One of the possible means of regionalism is in terms of administrative division of the country into states (Choudhury, 2009). Even more than six decades after independence, some of the states are still very backward and the abode of the largest proportion of poor in the country. The challenges raised by intra-regional disparities and their compounding implications on living conditions and governance are enormous (Diwakar, 2009).

As is widely recognized, there exist wide inter-state disparities in case of both physical and human-infrastructure essential for health. Under the constitution of India, the states are responsible for the provision of health care, but for one reason or the other, they are not able to cope with the demand for health. Like the United states, India has a federal political structure and health is a state subject, which means that the allocation of health expenditure are decided at the states’ level.

It is argued here that the health sector in Indian states are really a passive response to the changed socio-economic scenario, rather than an active action aimed at improving the health and nutritional status of the population. The analysis of variations across states in the health system in India suggests that there are two critical ways to improve health outcomes. The first is to create additional health infrastructure, thereby providing better access to health facilities and make more physicians available, particularly in rural areas. And, the second is to enhance the efficiency of the health sector, i.e., moving to the higher frontier.

An exhaustive and indepth study touching different dimensions of health and nutritional status among major Indian states and Union Territories can be of utmost help towards framing suitable welfare policies at the regional level. However, no such study seems to have been carried out in the recent past in the Indian context. The present study was, therefore, conducted which aimed at undertaking a comprehensive empirical analysis on some dynamic aspects of health and nutrition, and economic development among Indian states, with the ultimate objective of providing us with suitable measures to be adopted so as to enhance economic well-being of people of India. This investigation is intended to identify health and nutritional dimensions of inter-regional disparities, inequalities and imbalances
among the Indian states. Specifically, the study was undertaken with the following

**Objectives:**

1. To examine the pace and nature of growth in different dimensions of health and nutrition among the major Indian states;
2. To identify the chief determinants of health infrastructure among the states;
3. To examine the extent of inequalities in nutritional intake among the states;
4. To identify the main determinants of nutritional inequalities among the states;
5. To identify leading and lagging regions with respect to health/nutrition, so as to enable us to replicate the experience of forward regions among the backward ones;
6. To examine the presence and direction of causal linkage, if any, between economic growth and consumption expenditure on health & nutrition; and
7. To examine the presence, if any, and speed of convergence among the Indian states with respect to expenditure on food and non-food items.

**Hypotheses Tested:**

The hypothesis tested in the study were framed as follows:

1. Public expenditure on health and nutrition among the Indian states has grown in an accelerated manner;
2. Relative significance of different parameters of health status among the states has remained invariant;
3. Inter-state divergences in per capita expenditure on food items are fairly low;
4. Temporally, the inter-state inequalities in intake of calorie, protein and fat are narrowing down;
5. Expenditure on health and nutrition leads to accelerated growth in income; and
6. The states have undergone convergence with respect to per capita expenditure on food and non-food items.

**Chapter Scheme:**

The study has been organized into a totality of *twelve* chapters. The first chapter (*i.e.*, the present one) is devoted to introduction to the problem, highlighting orientation, objectives, hypotheses, *etc.*, of the study. The second chapter presents a review of the general studies related with health and nutrition. Chapter-III outlines data and techniques adopted in the study. Growth performance of expenditure on health and nutrition among Indian states has been analysed in Chapter-IV. An identification of major determinants of health status has been covered under Chapter-V. Inequalities in calorie intake among the Indian states/ UTs have been discussed in Chapter-VI. An identification of chief determinants of calorie inequalities has been made in Chapter-VII. Inter-regional gaps in nutritional intake (of Calorie, Protein and Fat) as evidenced from cluster analysis approach have been covered under Chapter-VIII. Inter-state divergences in nutritional expenditure (as measured through linear discriminant and general classificatory analyses) have been dealt with in Chapter-IX. Detection of causal linkages, if any, between health & nutritional expenditure and income among the different states has been made in Chapter-X. An examination of convergence among major Indian states with respect to expenditure on food and non-food items has been dealt with in Chapter-XI. And, finally, Chapter-XII presents summary, conclusions & policy implications derived from the study.