



Shifting of Disease Pattern in India

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Abstract- *Good health influence economic growth. Healthier workers are likely to be more productive; and healthier children more likely to exhibit better cognitive skills and become healthier adults. Moreover, there are behavioural effects that promote economic growth, with fewer children; parents are willing to spend more on their nutrition and education, thereby enabling the children to be participants of a more productive labour force when they grow up. Living longer might also lead them to save more for the retirement phase of their life, especially if there are institutional constraints, to their working beyond a certain age. In India, we can observe a shift in pattern of diseases. From poverty related cholera, malaria, etc., to higher-class related obesity, hypertension, diabetes, etc. - the diseases which are related to lifestyle.*

'Health is Wealth' is a very old say and in present economic scenario, it holds good. Until the early 1990s, only education was considered as an important component of human capital that influences economic growth. Today, improvements in health constitute an important element of 'pro-poor' economic growth strategies that have the potential of enhancing economic growth, while simultaneously reducing economic inequality.

We take three hypotheses, that is (i) There is a strong relationship between good health and economic growth (ii) There is a structural change in the pattern of diseases in India and its rapid economic growth could suffer due to the rise in Non Communicable Diseases (NCDs) and (iii) A good health system not only improves quality of life/well-being of life but also reduces burden of diseases, which will in turn increase productivity and growth in the country.

There is a major shift in the disease pattern. People in developing countries aren't vulnerable only to diseases of poverty - cholera, gastrointestinal diseases, malaria, meningitis, yellow fever, and a host of others. Indeed, in fast-developing countries, increasing wealth is associated with the increase of another group of diseases, often called "prosperity diseases."

In India, it turns out that the race to join the middle class is also a race toward health risks usually associated with wealth, not poverty. Increasing globalization means changing lifestyles: People who once ate locally grown fresh fruits and vegetables now eat less healthful foods. People, who once physical farm labour, now sit at desks. The result: soaring rates of type II diabetes and heart disease, and an increase in risk factors such as high cholesterol, high blood sugar, high blood pressure, tobacco use, poor diets, and sedentary lifestyles. The Indian Council for Research on International Economic Relations says that although the economy is growing, it has led to stress and has contributed to lifestyle diseases.

Lifestyle Diseases- The dictionary meaning of lifestyle disease: A disease associated with the way a person or group of people lives. Lifestyle diseases are diseases that appear to become ever more widespread as countries become more industrialized. These are different from other diseases because they are potentially preventable, and can be lowered with changes in diet, lifestyle, and environment. These include hypertension, heart disease, stroke, obesity, diabetes, diseases associated with smoking and alcohol and drug abuse, tobacco and nutrition-induced cancers, chronic bronchitis, and premature mortality.

Individuals in developing societies must fight mainly against infectious and communicable diseases, while in the developed world the battles are mainly against lifestyle diseases. Yet, at a very fundamental

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level, the problems are the same-the fight is against distress, disability, and premature death, against human exploitation and for human development. Sicknesses are not decreasing in number; they are only changing in type.

While life expectancy may have increased in the haves, and infant and maternal mortality reduced, these gains have not necessarily ensured that well-being results. There are ever-multiplying numbers of individuals whose well-being is compromised due to lifestyle diseases. These diseases are the result of faulty lifestyles and the consequent crippling stress.

Morbidity, disability, and death assail all three societies: the ones with infectious diseases, the ones with diseases of poverty, and the ones with lifestyle diseases. If it is bacteria in their various forms that are the culprit in infectious diseases, it is poverty/deprivation in its various manifestations that is the culprit in poverty-related diseases, and it is lifestyle stress in its various avatars that is the culprit in lifestyle diseases. (Singh, Ajay and Shakuntala, 2008). It is as though poverty and lifestyle stress have become the modern "bacteria" of developing and developed societies, respectively.

WHO-10 facts on Non-Communicable Diseases (NCDs) NCDs - or Chronic - Diseases are diseases of long duration and generally slow progression. The four main types of non-communicable diseases are cardiovascular diseases (like heart attacks and stroke), cancer, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.

Non-communicable diseases, or NCDs, are by far the leading cause of death in the world, representing 63% of all annual deaths. Non-communicable diseases (NCDs) kill more than 36 million people each year. Some 80% of all NCD deaths occur in low- and middle-income countries.

10 facts on Non-Communicable Diseases

- 1- NCDs account for 63% of all deaths. Non-communicable diseases (NCDs), primarily cardiovascular diseases, cancers, chronic respiratory diseases and diabetes, are responsible for 63% of all deaths worldwide (36 million out of 57 million global deaths).
- 2- 80% of NCDs deaths occur in low- and middle-income countries.
- 3- More than nine million of all deaths attributed to non-communicable diseases (NCDs) occur before the age of 60.
- 4- Around the world, NCDs affect women and men almost equally.
- 5- NCDs are largely preventable by means of effective interventions that tackle shared risk factors, namely: tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol.
- 6- NCDs are not only a health problem but a development challenge as well. They force many people into or entrench them in poverty due to catastrophic expenditures for treatment.
- 7- One and a half billion adults, 20 and older, were overweight in 2008.
- 8- Nearly 43 million children under five years old were overweight in 2010.
- 9- Tobacco use kills nearly six million people a year. By 2020, this number will increase to 7.5 million, accounting for 10% of all deaths.
- 10- Eliminating major risks could prevent most NCDs. If the major risk factors for chronic disease were eliminated, at around three-quarters of heart disease, stroke and type 2 diabetes would be prevented; and 40% of cancer would be prevented.

(Source: WHO, September 2011) Top lifestyle diseases in India

Heart Risk

- * India No.1 in cardiac patients: 10% population affected, US/Europe No. 2: 7% each; China: 4%.
- * Highest growth among young executives: 1 of 8 is under 40 years.
- * Heart attacks among executives at 10 years ahead of global average age: Prevention needs to start in early 20s.



* Prevalence of CAD up from 17.5% to 35% among corporate executives in past decade: two-fold rise.

* Heart attacks kill one in every 10 Indians.

Obesity/ Diabetes

* 31 percent of urban Indians are either overweight or obese.

* Obesity can, in fact, triple the risk of heart disease.

" India has one of the highest numbers of diabetic patients in the world, as many as 30 million, and growing by the day.

Stress/ Hypertension/Lipids

* Hypertension & Stress, especially from work, account for more than 50% of heart ailments

* 100 million people in India have high blood pressure

* Two out of three employees in India are victim of stress

* Over 40% of urban Indians have high lipid levels (cholesterol and triglycerides) that are the major risk factors for heart disease.

The disease profile is changing rapidly. The World health Organization (WHO) has identified India as one of the nations that is going to have most of the lifestyle disorders soon. Now-a-days not only are lifestyle disorders becoming more common, but they are also affecting younger population. Hence, the population at risk shifts from 40+ to maybe 30+ or even younger. Already considered the diabetes capital of the world, India now appears headed towards gaining another dubious distinction - of becoming the lifestyle-related disease capital as well. A study conducted jointly by the All-India Institute of Medical Sciences and Max Hospital shows the incidence of hypertension, obesity and heart disease is increasing at an alarming rate, especially in the young, urban population.

As life expectancies improve and the major causes of death and disability shift to the chronic and NCDs, populations in developing countries such as India are exposed to a new class of health risks: arising from physical inactivity; overweight and obesity, and other diet-related factors; and tobacco and alcohol-related risks. As a result, not only are they struggling to deal with traditional health risks, but they must also now divert resources to tackle the new menace.

Non-communicable diseases- This category accounts for the second-largest share, after communicable health conditions, of the disease burden in India and includes cancers, cardiovascular disease, diabetes, respiratory conditions such as asthma and chronic obstructive pulmonary disease (COPD), and mental health conditions. Available data suggest that these conditions will account for sharp increases in India's disease burden in the future.

Cardiovascular diseases- India has the highest number of disability adjusted life years (DALYS) lost due to coronary heart disease (CHD) among the emerging economies in the world. The number of DALYS lost in India stands at 20 days per 1,000 people, closely followed by Brazil. DALYS combines the years of potential life lost due to premature death with the years of productive life lost due to disability.

The number of deaths from CVD will also more than double with most on account of coronary heart disease—a mix of conditions that includes acute myocardial infarction, angina pectoris, congestive heart failure and inflammatory heart disease, although these are not necessarily mutually exclusive terms.

The prevalence rates among younger adults and women (in the age group of 40 years and above) are also likely to increase. A crude estimate of mortality on account of CVD, which could throw some light on prevalence, also shows wide inter-state disparities; with Rajasthan and MP having higher mortality levels of 275 and 229 per 100,000 than Kerala and Karnataka, which were 187 and 175, respectively. Of course, this differential could also reflect access to medical attention.

Diabetes- Diabetes, also associated with an increased risk for CVD, is emerging as a serious



health challenge in India, and particularly concentrated in the urban population. The data also reveal that the prevalence of diabetes is 6% in the 30-39 years age group, rising sharply to 13% in the 40-49 years age group, and to nearly one-fifth of the population 70 years and above. Its prevalence among women above the age of 40 years is high. India leads the world in diabetes cases. A government study estimated the number of diabetics to be about 38 million in 2004 and projected to rise to 57 million in 2025 and The International Diabetes Federation (IDF) estimates that the number of patients with diabetes in India has more than doubled from 19 million in 1995 to 50.7 million in 2010. It is projected to increase to 69.9 million by 2025. Currently, up to 11% of Indians urban population and 3% of its rural population over the age of 15 have diabetes.

Cancers- Cancers refer to a group of diseases associated with uncontrolled cell growth that can affect normal body functions, often with fatal outcomes. In India, cancers account for about of 3.3% of the disease burden and about 9% of all deaths. These estimates will, however, surely change as many of the common risk factors for cancers, such as tobacco and alcohol consumption; continue to become more prevalent in India.

Non-communicable diseases can also be extremely expensive to treat and clearly unaffordable for most of the country's population, particularly in the absence of any health insurance mechanisms and low public funding for health. Given that nearly 58% of hospital stays associated with cancers were at public hospitals, and another 6% at charitable hospitals, where health care is likely to be heavily subsidized, one can imagine what the potential financial consequences could be for households in the absence of such facilities. Stress and psychological costs to the person and his/her family members, or workdays lost, would be over and above this amount.

Asthma and chronic obstructive pulmonary- Two other important non-communicable conditions of concern are COPD and asthma. COPD refers to a group of disorders that are persistent and largely irreversible, such as chronic bronchitis and emphysema. It is associated with an abnormal inflammatory response of the lungs to noxious particles or gases, especially tobacco smoke and air pollution, both indoor and outdoor. Asthma is a chronic disease of the airways, characterized by sudden attacks of laboured breathing, chest constriction and coughing. Although asthma can occur at all ages, in roughly about half of all cases it occurs before the age of 10 years. Given the high cost of treatment, the level of impoverishment this disease causes is substantial. Ill health can lead to lost earnings on account of days missed for work which, together with substantial expenditures incurred on account of medical treatment, can impoverish families, particularly those living on the margins of survival. The financial impacts of ill health can be severe indeed - and can serve both to deepen poverty and increase the number of people living below the poverty line. Estimates based on household consumer expenditure surveys for India, suggest that the financial burden imposed by health-related spending could raise the proportion of people living below the poverty line in India by as much as 3.3 percentage points. These Expenditures are only a part of the overall picture. Given the financial consequences of ill health, the poor opt for care only if necessary. Evidence exists that when sick, poorer groups are less likely to seek care than rich groups, and nearly one-quarter of the poorest 20% in India's rural areas forgo treatment when reporting sick and when sick needing hospitalization go to the public hospitals. Perhaps the most important characteristic of ill health is that its impacts are likely to persist across generations. Not only is the next generation at risk from effects such as poor nutrition, inadequate housing, or insufficient hygiene and sanitation, but even after birth, children become more susceptible to many diseases and ailments than their parents were. Often, older children are pulled out of school to take care of a sick person at home or go to work owing to loss of family income, thereby affecting their long-term economic prospects. The impact on schooling or work may be particularly marked if an adult family member were to die, resulting in a decline in income and/or in other forms of support to a



household's activities that are more permanent in nature.

Lifestyle's Diseases Economic Cost- Lifestyle diseases may cost economy in terms of more deaths of its people and tremendous loss in Gross Domestic Product (GDP). As WHO Director Mr. Shin said, "Developing countries in the region are losing an increasing number of people who are still economically productive, so NCDs are no longer just health problems, but economic ones as well".

Rising income levels, changing demographics and shift in disease profile from chronic to lifestyle diseases propel the growth of healthcare industry. Pradip Kanakia, Head of Markets and Healthcare Services, KPMG, said, "While the Indian healthcare system has grown manifold over the past few years, it has yet not been able to keep pace with the rapid rise in the population". The World Health Statistics say that India ranks among the lowest in this regard globally, with 0.9 beds per 1,000 population far below the global average of 2.9 beds. India's National Health Profile 2010 says India has a current public sector availability of one bed per 2012 persons available in 12,760 government hospitals around 0.5 beds per 1,000 population, Sri Lanka on the other hand has 3.1 beds per 1,000 population, China 3 beds, Thailand 2.2, Brazil 2.4, USA 3.1 and UK 3.9 beds per 1,000 population (The Times of India, October 10, 2011). There is a dire need to introduce some radical reforms in the healthcare infrastructure development process - use of PPP models on a larger scale; foreign investments are some which could be considered.

In a little over a decade from now, chronic diseases like diabetes, hypertension, cancer, and AIDS would account for over 65% of deaths in India compared to 53% in 2005. By 2020, chronic diseases are expected to claim 7.63 million lives in India, compared to 3.78 million in 1990, a study said (The Times of India).

The economic cost of chronic diseases will run into trillions of dollars, experts say. Many Asian governments, however, spend relatively little on public healthcare and a small percentage of that goes towards prevention of lifestyle diseases.

India's rapid economic growth could be slowed by a sharp rise in the prevalence of heart disease, stroke and diabetes, and the successful information technology industry is likely to be the hardest hit, a study has found. The estimated loss in national income because of heart disease, stroke, and diabetes in 2005 was US\$9 billion. This is projected to reach US\$200 billion in the next ten years.

The study by the Indian Council for Research on International Economic Relations says that although India's boom has brought spiralling corporate profits and higher incomes for employees, it has also led to a surge in workplace stress and lifestyle diseases.

The Indian healthcare industry is seen to be growing at a rapid pace and is expected to become a US\$280 billion industry by 2020. Rising income levels and a growing elderly population are all factors that are driving this growth. In addition, changing demographics, disease profiles and the shift from chronic to lifestyle diseases in the country has led to increased spending on healthcare delivery. To meet manpower shortages and reach world standards India would require investments of up to \$20 billion over the next 5 years.

The WHO projects that by 2020, chronic diseases will account for almost three-quarters of all deaths worldwide, and that 71% of deaths due to cardiac disease, 75% of deaths due to stroke, and 70% of deaths due to diabetes will occur in developing countries. A WHO study says, "On a global basis, 60% of the burden of chronic diseases will occur in developing countries. Indeed, cardiovascular diseases are even now more numerous in India and China than in all the economically developed countries in the world put together".

The market for diabetes drugs is estimated to be worth over Rs1,000 crore. "These are the two fastest-growing segments from the drug industry perspective, the Indian cardiovascular drug market, which is estimated to be Rs2,500 crore a year, is currently 10% of the total Rs25,000 crore drug market. Growth



rates of 15% and 17%, respectively," says Kirit Gogri, a leading pharma analyst with Mumbai-based equity research firm, 'ASK Raymond James'. Some Indian corporations, especially large ones, are realizing the importance of employees' health and are beginning to invest in wellness programmes.

Reasons and Remedies- Doctors blame sedentary lifestyle, lack of physical activity, obesity, stress, and consumption of a diet rich in fat and sugar for the high incidence. Similarly, stress both at work and at home is going to take a further toll with the number of people suffering from hypertension estimated to rise 213.5 million in 2025. "Lifestyle diseases ... have already become the number one killer in India," said D. Prabhakaran, a professor at the department of cardiology at the All-India Institute of Medical Sciences.

"The most important factors for lifestyle diseases are increasing consumption of tobacco, dietary consumption of fats, particularly saturated fat, lack of physical activity and inadequacy of stress-coping mechanisms," With rising prosperity in many parts of Asia, people are adopting unhealthy lifestyles that their bodies cannot cope with. Sedentary jobs, poor diet, smoking, and alcohol are all blamed for the dramatic health shift. There are ever-multiplying numbers of individuals whose well-being is compromised due to the lifestyle diseases mentioned above-the result of faulty lifestyles and the consequent crippling stress. But it serves no one's purpose to understand them as such.

Working in prolonged night shifts affects the biological clock and results in insomnia and consequently, deterioration in over-all health. Heart diseases and cases of heart attacks have become so common. So has hypertension. Three out of four persons now complain of high blood pressure. Deadlines and commitments at workplaces cause immense strain and failure to meet these results in severe depression. Lack of physical exercise and outdoor games in children is resulting in obesity which has taken a massive form abroad and is affecting children in India as well.

India's health scenario currently presents a contrasting picture. While health tourism and private healthcare are being promoted, a large section of Indian population still reels under the risk of curable diseases that do not receive ample attention of policymakers.

'Well-being meant that it is mainly positive emotions, character strengths, virtues, and life satisfaction, which is the result of growth in self-awareness (Cloninger, 2004). It is also the result of letting go of all struggles, working in the service of others, and growing in awareness. The foundation for personal well-being is the self-awareness that each being is an inseparable part of a universal unity of being (Cloninger, 2008). Thinking beyond individual human existence, understanding, and establishing transpersonal connections are essential to well-being.

What stands out from such observations/studies are the following:

- * Moderation of lifestyle: eating frugally; choosing a congenial occupation; developing a placid and easy-going personality; abstaining from stimulants and sedatives; living in a temperate climate; lack of high ambition; living quiet and independent lives; being happy with their job, family, religion; having few regrets.
- * Care for physical self: eating frugally, and therefore not becoming overweight; exercising and getting plenty of fresh air; maintaining a high level of personal hygiene; drinking wholesome liquids; getting proper medical attention in case of illness.
- * Self-sufficiency and simplicity: living quiet and independent lives; lack of high ambition; having high appreciation for the simple experiences/pleasures of life; being autonomous; having a sense of self-sufficiency.

In conclusion, lifestyle diseases are our own creation, if we change our lifestyle, tendency of work-holism and sedentary living environment, the temptation of taking fast-food and junk-food, feeling pleasure with wealth deposition. The only solution of these diseases lies in the fact that one needs to control their anger



and greed, be compassionate to others, start Yoga, meditation, attempt therapies from alternative and complementary medicine, simplify their life, downsize career ambitions, avoid over-consumption, spend their time with family, tune in to inner self. These steps should make one's life more meaningful and improve the quality of life.

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