

Chapter I

Introduction

“Disabled people are not only the most deprived people in the developing world, they are also the most neglected.”

(Sen & Wolfensohn, 2005, p,518)

Economic development is the ultimate goal of any economy. Economic development includes not only increase in gross domestic product (GDP) or increase in availability of goods and services, but reduction in income inequality, increase in standard of living of masses, increase in the level of education and improvement in health status of the population. For a long time increase in health status was basically understood in terms of increase in life expectancy at birth (LEB) and decrease in infant mortality rates (IMR). In the development literature, it was understood that economic growth leads to a rise in per capita income which enables a population to afford better healthcare services, and provide greater access to improved water and sanitation facilities, all of which have a positive impact on infant and child mortality and life expectancy.

However, health was not considered as an important input influencing economic performance of a country. Research on economic growth was solely focused on the role of physical and financial capital, and labour force. The latter was basically seen in terms of its skill levels and efficiency, which are, no doubt, of extreme importance in the light of rapid changes in technology, especially since the formation of World Trade Organization. However, health status of labour force was hardly given attention as an important input for economic development. However, in the last three decades researchers have noted that improved health leads to an increase in productivity, lesser absenteeism (due to lesser instances of illness) and longer working life for an individual. All these changes have positive influence on economic performance of a country. Hence, for any society

continuous improvement in health status of its population is necessary for ensuring higher rate of growth of the economy.

Importance of good health

Good health is an important asset for individuals. Traditionally, absence of any physical disease was commonly understood as a sign of good health. However, absence of any disease is, of course, necessary for good health, but other dimensions of health like mental and social well-being are equally important. Hence, WHO at the time of its inception in 1948 defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1948, p,100). Good health, in all its dimensions, is important for an individual, not only for its own sake, but also for a happy and peaceful life, for developing and maintaining social relationships and for contributing to the production activity of the society. It provides the foundation for stability and growth of individuals, families and societies.

Any departure from good health or instances of ill-health affects all of them negatively: (1) an individual has to bear pain, suffering, loss of work and expenses on treatment; (2) a family has to bear a loss of time, income in caring and expenses on treatment and impoverishment; (3) a society has to experience loss of hours of work and production and other ill-effects arising due to it.

Summing up, any departure from good physical health or good mental health affects individuals, caregivers and society negatively.

Mental illness: Popular perception

Mental illness is as old as the human race itself. Early societies noticed that there were abnormal changes in behaviour and thinking of individuals, which affected their day to day functioning, work and relationship. Moreover, these changes were different from those related to bodily or physical illnesses. However, the traditional societies could not understand the nature, causal mechanism and solution to these problems. Since no systematic and scientific explanation of these illnesses was available, according to the

custom of the time, spiritual and magico- religious explanations were accepted as the cause and solutions to these problems. In tribal societies supernatural visitation and environmental shock are still seen as the causes of mental illness. In India, it is commonly believed that one's karma or actions in a past life determine the success, failure and illness of the present life. Hence, severe (and chronic) illnesses like mental illnesses were perceived as punishment for wrong doing in the past (Khandelwal, Jhingan, Ramesh et. al., 2004).

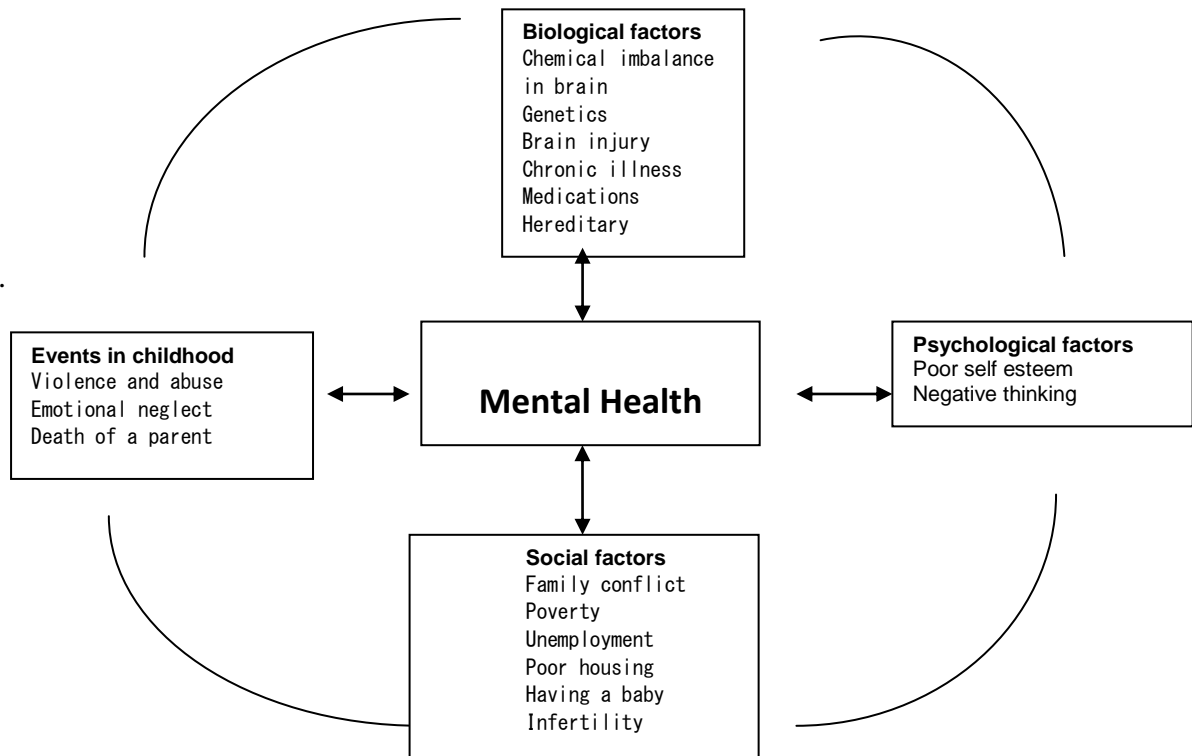
Mental Illness: Modern explanations

In the last two centuries curiosity, interest and research in mental illnesses have steadily increased. Mental illnesses, which were inexplicable in the earlier centuries, gradually were seen as medical or biological problem in the scientific community. Research in anatomy, understanding, role, functioning and importance of brain facilitated this process. Epidemiological and etiological research helped to understand causal factors and mechanism of mental illness. Now it is well understood by the scientific community that like physical illnesses, mental illness is a biological or medical problem and social, psychological and environmental factors influence its emergence, growth and future course.

Mental and behavioural disorders are understood as clinically significant conditions characterized by alterations in thinking, mood (emotions) or behaviour associated with personality distress and/or impaired functioning (WHO, 2001, p,21). Various factors have been suggested as causal factors. Nature (that is, role of genetic factors) was a dominant theme earlier. Since the fifties, nurture (that is, role of environment) is regarded as an important causal factor. That was the time when argument of nature vs. nurture was debated. However, now it is well accepted that both nature and nurture are equally important (WHO, 2001). National Institute of Mental Health and Neurosciences (NIMHANS, 2009) has given six causal factors for occurrence of mental disorders, viz., changes in the brain, hereditary factors, childhood experience, home atmosphere, social factors and individual factors.

These factors are usually grouped into four broad domains, i.e., biological, psychological and social factors, and childhood events. They interact and decide the nature, extent and type of mental illness. The following figure considers and groups them in to four domains.

Figure 1.1
Factors causing mental disorders



Source: (Basic Needs, 2009, p,25).

Impact of mental disorders

Mental disorders have a lasting impact on individuals, families and society. Individuals suffer due to distressing symptoms, loss of work and leisure activities, feeling of shame and guilt, and very stigma and discrimination in society. Families have also to suffer in a variety of ways. They have to bear the cost of treatment, loss of income due to caring, stress of coping with family member's symptoms and often stigma and discrimination owing to disorder in the family. Impact of mental disorders on society is

large and manifold. It includes cost of health care, loss of productivity and several non-health care costs. Knowledge of the size of burden of each one of the diseases is important for the purpose of health policy planning and for deciding allocation of resources among different competing health issues. Impact of mental disorders is measured with the help of burden of disease measures.

Burden of a disease (BOD)

It can be measured with the help of two approaches- epidemiological approach and economic or cost of illness approach. In epidemiological approach, BOD is measured with the help of health status indicators like mortality or morbidity rates – namely, prevalence or incidence and disability rates. These rates reflect spread or severity of a disorder. Economic burden or cost of illness approach measures the total cost of illness calculated in monetary terms for the individual, family, employer and society. Both these approaches look to the problem of burden from different angles and estimate severity accordingly.

BOD: Epidemiological Approach

Traditionally BOD has been measured in terms of prevalence¹ or incidence rate and mortality rate² (WHO, 2001; Saxena, Sharan, & Saraceno, 2003a). Prevalence rate is measured in terms of the number of persons having a particular condition either at a point of time or over a period of time. Incidence rate is measured as the number of new cases of a specific disease occurring per 1000 population in a period of one year (Park, 2015,p,60-61). Mortality rate is a measure of the number of deaths, due to either a specific cause or all causes per 1000 population in one year (Park, 2015,p,57).

Burden of mental illness

Due to limited availability of data, incidence rate is not often used as an indicator for measuring BOD. It is the prevalence rate which is often used for understanding the

¹ Point prevalence measures the number of persons with a condition at a specific point of time, period prevalence measures the number of persons with a condition over a specific period of time (usually one year) and life time prevalence as the number of persons with a condition during their life span.

² This is also called as Crude Death Rate.

severity of illness. Table 1.1 below shows that the aggregate prevalence rate for mental illness is 65 per thousand. Common mental disorders (CMDs) represent a high percentage in the total. It becomes clear that the percentage and number of persons with mental illness are very large. It is not a disorder which is rare or with small percentage and number but it is estimated that as many as twelve crore people are likely to be affected by mental illness in 2015.

| Table 1.1 All-India estimates of mental, select neurological and substance use disorders | | | | | |
|--|------------|------------|------------|------------|------------|
| Type of mental and behavioural disorder | Prevalence | 2001 | 2005 | 2010 | 2015 |
| All-India population (in lakh) ¹ | | 10,280 | 10,760 | 11,620 | 12,450 |
| Major mental/behavioural disorders | 65 | 66,859,671 | 70,000,710 | 75,548,395 | 80,978,755 |
| Schizophrenia | 3 | 3,085,831 | 3,230,802 | 3,486,849 | 3,737,481 |
| Mood disorders | 16 | 16,457,765 | 17,230,944 | 18,596,528 | 19,933,232 |
| Cannabis users | 8 | 8,228,883 | 8,615,472 | 9,298,264 | 9,966,616 |
| Opiate users | 2 | 2,057,221 | 2,153,868 | 2,324,566 | 2,491,654 |
| Mental retardation | 1 | 1,028,610 | 1,076,934 | 1,162,283 | 1,245,827 |
| Child and adolescent disorders | 43 | 25,509,536 | 26,707,963 | 28,824,618 | 30,896,510 |
| Geriatric disorders | 3 | 2,550,954 | 2,670,796 | 2,882,462 | 3,089,651 |
| Dementia | 2 | 1,563,488 | 1,636,940 | 1,766,670 | 1,893,657 |
| Epilepsy | 9 | 9,257,493 | 9,692,406 | 10,460,547 | 11,212,443 |
| Common mental disorders | 20 | 20,572,207 | 21,538,680 | 23,245,660 | 24,916,540 |
| Alcohol users | 60 | 61,716,620 | 64,616,040 | 69,736,980 | 74,749,620 |
| Alcohol dependency ⁺ | 10 | 10,286,103 | 10,769,340 | 11,622,830 | 12,458,270 |
| * Rate per 1000 population all ages and both sexes. Rates after adjusting to the age distribution. The numbers do not add up as the estimates have been arrived at from individual or pooled or representative studies. See the text for the basis of these estimates. | | | | | |
| ¹ This group does not include hazardous alcohol users whose number would be approximately 24 crore. | | | | | |
| This table is reproduced from Gururaj, Girish, & Isaac, 2005. | | | | | |

Aggregate point prevalence rate for mental disorders is 10 per cent which means that in the year 2010, 700 million persons in the world were suffering from them (Patel &

Saxena, 2013). This number will be 125 million for India. Aggregate life time prevalence for mental disorders is 25 per cent which means that one person in four suffers from mental disorders in their life time (WHO, 2001).

Mortality rates (or premature death) are another important indicator that is used in order to measure the severity of a disease. By using average life expectancy in years and age at the time of death, premature mortality or Years of Life Lost (YLL) due to a disease is calculated. It becomes clear from Table 1.2 below that the share of mental illness in YLL is small while cardio vascular disorders, cancer and AIDS account for a high proportion in YLL or in premature mortality.

| Table: 1.2 Proportion of YLLs by ten leading causes of total burden in 2010 | |
|--|--|
| | Proportion of total YLLs (95 per cent UI) |
| Cardiovascular and circulatory diseases | 15.9 per cent (15.0-16.8) |
| Diarrhoea, lower respiratory infections, meningitis and other common infectious diseases | 15.4 per cent (14.0-17.1) |
| Neonatal disorders | 11.2 per cent (10.2-12.4) |
| Cancer | 10.7 per cent (10.0-11.4) |
| Mental and substance use disorders | 0.5 per cent (0.4-0.7) |
| Musculoskeletal disorders | 0.2 per cent (0.2-0.3) |
| HIV/AIDS and tuberculosis | 7.0 per cent (6.4-7.5) |
| Other non-communicable disease | 2.4 per cent (2.0-2.8) |
| Diabetes, urogenital, blood, and endocrine diseases | 3.8 per cent (3.4-4.3) |
| Unintentional injuries other than transport injuries | 5.5 per cent (4.9-5.9) |
| YLLs = Years of life lost. | |
| Source: (Whiteford et. al., 2013,p,1578) | |

Unsuitability of these measures for mental disorders

In mental disorders (and other chronic disorders too) patients develop their symptoms. But due to the symptoms people do not die early. What is affected is their functionality (disability) or ability to perform their day to day activities or employment

related or other functions. All persons with mental illness do not become dysfunctional or disabled. However, for a significant proportion of persons affected by mental disorders, disability or loss of functionality of varying degree is a major issue as compared with other chronic disorders. Owing to the disability, people may not be able to continue their education or take up and retain a job, have family and social life and contribute economically.

Disability, which is a major issue in mental illnesses, was paid little attention in the traditional measures of BOD. As a result, diseases with low mortality but high disability (like mental illness) ranked at a lower level. Mental disorder was the most prominent case among them.

WHO in its landmark *Mental Health: New Understanding, New Hope, 2001* for the first time emphatically argued that these (traditional) indices are more suitable to acute diseases that either cause death or result in full recovery (WHO, 2001,p,25). However, use of these measures for chronic and disabling diseases poses serious limitations. This is particularly true for mental health disorders which often cause disability rather than death (WHO, 2001,p,25).

Defining disability

The WHO defines disability as any restriction or lack of it (resulting from impairment) of ability to perform in a manner or within the range considered normal for a human being (WHO, 2001; WHO & World bank, 2011; NSSO,2002). In India, the NSSO considered disability as “Any restriction or lack of abilities to perform an activity in the manner or within the range considered normal for human beings” (GOI,2003). According to the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, "Person with disability" means a person suffering from not less than forty per cent of any disability as certified by a medical authority (any hospital or institution, specified for the purposes of this Act by notification by the appropriate Government). As per the Act, disability means (i) blindness; (ii) low vision; (iii) leprosy-cured; (iv) hearing impairment; (v) loco motor disability; (vi) mental retardation; and (vii)

mental illness. In all these definitions, individuals with certain physical, intellectual, psychological and mental conditions (impairment) are regarded as pathologic or abnormal; it is simply the abnormality conditions themselves that are the cause of all restrictions of activities. This is the essence of medical model of disability (Chaudhari, 2006).

Disability is complex, dynamic and multi-dimensional. Recently due to movement of disabled people and research, the role of social and physical barriers in disability has been accepted. This has resulted in the transition from an individual, medical perspective to a structural, social perspective. This is described as the shift from a “medical model” to a “social model” in which people are viewed as being disabled by a society rather than by their bodies (WHO & World bank, 2011,p,4).

The medical model and the social model are often presented as dichotomous. World report on disability (WHO & World bank, 2011) takes a balanced approach and understands disability as a dynamic interaction between health conditions and contextual factors, both personal and environmental. Disability is defined as “Umbrella term for impairments, activity limitations and participation restrictions, referring to the negative aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors)” (WHO & World Bank, 2011,p,4).

All these definitions highlight reduced ability or functionality as an important outcome of a disease which needs to be accounted whatever may be causal factor/s for it.

Global burden of disease project

In order to overcome this difficulty, in the early 1990s a pioneering project was undertaken at Harvard School of Public Health in collaboration with WHO and World Bank. Global burden of disease project (GBOD) was led by two eminent health economists, Murray and Lopez. They suggested a new matrix, a composite indicator DALY-Disability Adjusted Life Years. The latter includes two indicators, Years of Life Lost (YLL) due to premature death and Years of Life Lived with Disability (YLD). DALYs lost for a disease is the sum of YLL and YLD (Murray & Lopez, 1996). DALYs

provide a representative picture of disease burden. Use of DALY as a new indicator dramatically changed ranking of diseases according to their burden. The disease, which ranked at a lower position on mortality scale but contributed significantly on a disability scale, ranked at a much higher position when the new criterion of DALY is used. Mental disorder is one among such diseases.

| Table: 1.3 Proportion of YLDs, YLLs, and DALYs explained by the ten leading causes of total burden in 2010 | | | |
|---|--|---|---|
| Name of the disease | Proportion of total DALYs (95 per cent UI) | Proportion of total YLDs (95 per cent UI) | Proportion of total YLLs (95 per cent UI) |
| Cardiovascular and circulatory diseases | 11.9 per cent (11.0-12.6) | 2.8 per cent (2.4-3.4) | 15.9 per cent (15.0-16.8) |
| Diarrhoea, lower respiratory infections, meningitis and other common infectious diseases | 11.4 per cent (10.3-12.7) | 2.6 per cent (2.0-3.2) | 15.4 per cent (14.0-17.1) |
| Neonatal disorders | 8.1 per cent (7.3-9.0) | 1.2 per cent (1.0-1.5) | 11.2 per cent (10.2-12.4) |
| Cancer | 7.6 per cent (7.0-8.2) | 0.6 per cent (0.5-0.7) | 10.7 per cent (10.0-11.4) |
| Mental and substance use disorders | 7.4 per cent (6.2-8.6) | 22.9 per cent (18.6-27.2) | 0.5 per cent (0.4-0.7) |
| Musculoskeletal disorders | 6.8 per cent (5.4-8.2) | 21.3 per cent (17.7-24.9) | 0.2 per cent (0.2-0.3) |
| HIV/AIDS and tuberculosis | 5.3 per cent (4.8-5.7) | 1.4 per cent (1.0-1.9) | 7.0 per cent (6.4-7.5) |
| Other non-communicable disease | 5.1 per cent (4.1-6.6) | 11.1 per cent (8.2-15.2) | 2.4 per cent (2.0-2.8) |
| Diabetes, urogenital, blood, and endocrine diseases | 4.9 per cent (4.4-5.5) | 7.3 per cent (6.1-8.7) | 3.8 per cent (3.4-4.3) |
| Unintentional injuries other than transport injuries | 4.8 per cent (4.4-5.3) | 3.4 per cent (2.5-4.4) | 5.5 per cent (4.9-5.9) |
| Abbreviations are already explained above. | | | |
| Source: (Whiteford et. al., 2013,p,1578) | | | |

Table 1.3 shows the share of mental illness in the DALYs lost, in YLL and in YLD of the ten leading diseases at the global level. The share of mental disorder in premature mortality, i.e., YLL is very small at 0.5 per cent. However, the share of mental disorders in

YLD due to all the diseases is the highest at 22.9 per cent. Due to such a high share in YLD, mental disorders account for 7.4 per cent of DALYs lost due to all the diseases which is the fifth highest percentage, preceded by cardio vascular, respiratory, neonatal and cancer.

Table 1.4 below shows shares of various individual mental disorders in the total DALYs, YLDs and YLLs lost. Depression is the single most important cause accounting for more than one-third of the total DALYs lost. Depression and anxiety disorders (which are often ignored by individuals, families and society) account for around half of the DALYs lost due to all mental disorders. Alcohol and substance abuse disorder, schizophrenia and bi-polar disorders also constitute a significant percentage of DALYs lost.

| Table: 1.4 Proportion of DALYs, YLDs and YLLs explained by type of mental illness in 2010 | | | |
|--|------------------------------------|-----------------------------------|-----------------------------------|
| | Proportion of total DALYS (95% UI) | Proportion of total YLDs (95% UI) | Proportion of total YLLs (95% UI) |
| Depressive disorders | 40.5 (31.7-49.2) | 42.5 (33.-51.7) | 0 |
| Anxiety disorders | 14.6 (11.2-18.4) | 15.3 (11.7-19.3) | 0 |
| Schizophrenia | 7.4 (05.0-09.8) | 7.4 (04.6-10.8) | 7.1 (04.8-10.2) |
| Bipolar disorder | 7.0 (04.4-10.3) | 7.4 (04.6-10.8) | 0 |
| Eating disorders | 1.2 (00.9-01.5) | 1.1(00.8-01.5) | 2.4 (01.4-03.4) |
| Childhood behavioural disorders | 3.4 (02.2-04.7) | 3.5 (02.3-04.9) | 0 |
| Pervasive developmental disorders | 4.2 (03.2-05.3) | 4.4 (03.4-05.6) | 0 |
| Idiopathic intellectual disability | 0.6 (00.3-00.9) | 0.6 (00.4-01.1) | 0 |
| Alcohol use disorders | 9.6 (07.7-11.8) | 7.9 (06.0-10.0) | 44.4 (29.1-60.0) |
| Drug use disorders | 10.9 (08.9-13.2) | 9.4 (07.3-11.5) | 41.7 (27.9-56.9) |
| Other mental disorders | 0.8 (00.5-01.2) | 0.6(00.4-00.9) | 4.3 (02.40-6.3) |
| Source: (Whiteford et. al., 2013,p,1578). | | | |

Burden of Disease Economic Approach

Economic or Cost of Illness approach tries to capture economic impact of diseases. It measures costs that various stakeholders like individual, family, employer and society have to bear due to mental illness. These costs are classified as 1) Direct and indirect costs, 2) Measurable costs and non-measurable or intangible costs, and 3) Core costs and non-health care costs. Direct costs include cost of treatment/cost of medicines, fees of professionals and hospitalization charges, transportation cost for commuting and other costs to various government departments. Indirect costs basically include loss of productivity due to time lost (of patient and caregiver).

Measurable costs include all the costs for which expenditure is made (direct costs) or the costs for which monetary value can be imputed (indirect costs). Non-measurable or intangible costs which basically include psychological and emotional cost that individual and family have to bear. The costs include pain and suffering, hopelessness, guilt, stigma and social exclusion due to mental illness. Though these costs are non-measurable, they pose a significant burden on the individual and family ((WHO, 2001; WHO, 2003). They are much higher for mental disorders when compared with similar costs for physical illnesses (WHO, 2003; WHO, 2013).

| Table 1.5 Types of measurable costs | | |
|--|--|---|
| | Core costs | Other non-health care costs |
| Direct costs (payments made) | Treatment and service fees/payments | Social welfare administration Public and private criminal justice system Transportation |
| Indirect costs (resources lost) | Morbidity cost (in terms of value of productivity lost) Mortality costs | Value of family caregivers time |
| Source: (WHO, 2003. Investing in Mental Health,p,14) | | |

Core costs are related to availing mental health services and loss of productivity, either due to morbidity or premature mortality. Other non-health care costs include transportation cost and costs that government departments (like social welfare, justice,

etc.,) have to bear. Table 1.5 summarizes measurable costs cross classified into direct and indirect costs and core and other non-health care costs. Table 1.6 provides all economic costs and different stakeholders who have to bear these costs.

| Table 1.6 Overall economic burden of mental disorders | | | |
|--|---|--------------------------------|--|
| | Care costs | Productivity costs | Other costs (non-measurable) |
| Sufferers | Treatment and service fee/payments | Work disability; lost earnings | Anguish/suffering, treatment side effects and suicide |
| Family and friends | Informal care-giving | Time off work | Anguish, isolation, stigma |
| Employers | Contribution to treatment and care | Reduced productivity | - |
| Society | Provision of mental health and general health care (taxation and insurance) | Reduced productivity | Loss of lives, untreated illness (unmet needs), social exclusion |
| Source: (WHO, 2003, Investing in Mental Health, 2003,p,14) | | | |

Estimating the cost of illness (absolute and relative) is important as it gives an idea of the economic impact of illness. Attempts to measure costs of mental illness are of recent origin. All of these studies are from high income countries. There is not a single study from low or middle income countries (including India) which measures the cost of mental illness. it should be noted that some of the costs are difficult to measure (Knapp, 2003). Table 1.7 provides details of these studies along with estimates of their costs.

| Table 1.7 Estimates of cost of illness, share of indirect cost and cost as a percentage of GNP by country and study | | | | | |
|--|----------------------------|----------------------------------|---|------------------------|-------------------|
| Country | Researcher | Year for which cost is estimated | Cost in dollars | Share of indirect cost | Percentage of GNP |
| USA | Rice et. al., 1990 | 1985 | 218.1 Bn (Aggregate Yearly cost) | | 2.5 |
| USA | Market et. al., 2000 | 1997 | 85.3 Bn spending on treatment for mental illness and substance abuse | 55 | |
| UK | Patel and Knapp, 1998 | | 32 bn | 45 | |
| EU | ILO, 2000 | | Euro 108 Bn | | 3-4 |
| Canada | Stephens and Joubert, 2001 | 1998 | 14.4 bn | | |
| Nether Lands | Meerding et. al. | 1998 | 23.2 per cent (share of mental health cost out of total health costs) | | |
| World | World Economic Forum | 2011 | 2.5 Tr. (2010) 6.0 Tr. (2030) | 67 67 | |

Note: Consistent data are not available for all the headings.
Source: WHO, 2001; HU, 2006; World Economic Forum, 2011; Rice, Kelman, Miller et.al., 1990; (Meerding, Bonneux, Polder et.al, 1998; Patel & Knapp, 1998; Teh, 2004;

Changing scenario of disease burden and growing importance of mental health problems

Disease burden measured in terms of DALYs lost, absolute and share of each disease in the total, is useful for understanding changing relative importance of disease burden scenario. This burden is changing rapidly in India and the world over due to social,

cultural, demographic, technological and other changes that are taking place. This is particularly true for BOD due to mental disorders. Following are the features of the changing burden of disease scenario.

1. Changing composition of disease burden

Communicable Diseases (CDs) and Non-Communicable Diseases (NCDs) constitute total BOD. CDs imposed higher BOD in the fifties and sixties in the greater part of the world. However, due to increasing immunization and effective control of CDs, its spread and burden has declined substantially. The trend, which started in the High Income Countries (HIC), is now observed in Low Income Countries (LIC). India has shown a marked decline in BOD (DALYs lost) due to CDs. In 2004, DALYs lost due to NCDs were 62 per cent in India, while that due to CDs were 38 per cent (GOI, 2014; World Bank, 2011). This is expected to increase rapidly in the years to come. Another trend is a shift in the disease burden from YLL to YLD (Whiteford, Degenhardt, Rehm et.al. 2013)

2. Growing urbanization

The world over population is gravitating towards cities, which are increasingly overburdened due to continuous flow of people towards them. They are facing an acute shortage of space, congestion on roads, over-crowded localities, rising air and water pollution, and crumbling infrastructure. The world over 54 per cent of the people lived in urban areas in the year 2014 vis-a-vis 43 per cent in the year 1991. This percentage is expected to increase to 66 per cent in 2050. In India 32 per cent of the population lived in urban area in 2014 vis-a-vis 26 per cent in the year 1991. This is expected to increase to 50 per cent in the year 2050 (United Nations, 2014). This pace of urbanization is not only undesirable from the point of view of urban infrastructure, but also imposes negative mental health consequences. It is well documented that MHPs are positively correlated with the degree and nature of urbanization that takes place in a society (Thornicroft & Patel, 2014).

3) Increase in Life Expectancy

Another factor that has a bearing on disease burden in general and MH problems in particular is the rise in life expectancy of the population. This has resulted in a growing proportion of people aged 60+ the world over including India. A rise in aging population will lead to a rise in BOD due to NCDs in general and mental illnesses in particular. Parkinson's disease, Alzheimer's disease, dementia and other geriatric disorders are on the rise. In India life expectancy at birth has increased to 66 years in 2013 from 58 years in 1990.

4) Civil wars and chaos

Civil wars, which erupt in different parts of the world and resultant dislocation of population due to political and economic uncertainty result in increased stress and mental health problems for the affected population (Brundtland, 2000). Many countries in Africa and Asia, which gained independence after the Second World War along with many Latin American countries are facing political, military and economic crises.

5) Radical shifts in the society

Stability in the structure and support of the family and society are prerequisites for good mental health of the population. However, second half of the twentieth century and first decade of the twenty-first century have experienced rapid shifts in the society towards technology, changes in family, societal support, networks and commercialization of existence. This may account for current epidemic of depression and other psychiatric disorders (Brundtland, 2000).

Purpose of this study

All the above factors indicate that the burden of mental illness is going to increase in the times to come. This study has been undertaken with a view to understanding the extent to which this burden is being addressed by individuals, families and society. It goes

further and defines the deficiencies in response of government/society and families as supply and demand gap in mental health respectively. It was undertaken to understand the supply and demand gap for mental health in terms of its size and determinants. Supply gap and its determinants has been widely discussed, but demand gap, its components and determinants have been discussed only to a limited extent. This research effort has been primarily undertaken to fill this gap.

Chapter scheme of the thesis

This thesis is divided into eight chapters. Chapter I presents various estimates of the burden of mental illness and trends in it. Chapter II provides a review of literature of the concepts of supply and demand gap and their determinants. Chapter III presents methodology used for collecting data from the sample households and nature of questionnaire used. Chapter IV discusses the background characteristics of the sample households. In Chapter V findings about the extent of MRD and MNPT are presented. Chapter VI examines the inequality in MRD, MNPT and PD among sample households according to social, demographic, economic, medical and geographic characteristics. The inequality is statistically analysed with Pearson correlation coefficient, OLS regression and Logistic Regression. In Chapter VII measures to reduce supply and demand gap are discussed. Finally, Chapter VIII provides a summary of the findings.