MODULE 1

BASIC UNDERSTANDING OF MENTAL DISORDERS AND THEIR TREATMENT

1. Overall Learning Objective:
To provide students with a basic understanding of the different types of mental disorders and their treatments.

Rationale:
The last few decades have seen marked progress in the understanding of the different types of mental disorders and their treatment. Mental disorders are caused and their expression are modified by a combination of biological, psychological and social factors. Effective psychotropic medications and psychosocial interventions are now available for a range of mental disorders.
Mental health services, both specialized and generic, are the means by which effective interventions for mental health are delivered. WHO proposes community-based care, supported by general hospital psychiatric beds, instead of mental hospital-based care for persons with mental disorders. The WHO model of care emphasizes the integration of mental health services into general health services to improve access to care and enhance equity..

Legislation can play an important part in promoting community-based service delivery models and increasing access to mental health services. Therefore, stakeholders involved in promoting, developing and implementing mental health legislation should have a good understanding of the current thinking in the identification and care of persons with mental disorders.

Historical Perspectives on Mental Disorders

Beginnings of psychiatry
In the earliest civilizations (for example in Egypt and Asia), belief in evil deities or demons as cause of mental illness prevailed and priests were main therapists. They used magical and religious rites to counter those forces. In the civilizations of ancient Greece and Rome, psychiatry was province of religious cults for healing illnesses.

In the history of civilized societies, this belief in magical powers of malevolent deities or spirits fluctuated in complex ways, and in some developing countries and in sectors of the population in high-income countries it continues to be regarded as a cause for mental illness.

Greek psychiatry
Hippocrates (460-370 BC) divided human body into four different types of humors– phlegm, yellow bile, black bile, and blood. He stated that different organs produce these humours, have different characteristics and change with seasons. The brain was considered the main organ, keeping balance between these humors. The notion was that excess or deficit of these humors causes various forms of abnormal behaviors. Small increase in all of these caused different types of personalities. For example, while large increase in yellow bile was thought to give rise to manic rage, phlegm was thought to cause dementia while increase in black bile resulted in melancholy.

Various authors in the Hippocratic era wrote and classified diseases like epilepsy, mania, phobias, delirium, postpartum psychosis and hysteria. They believed that proper self-care, maintaining cleanliness and regular dieting were important means in keeping these humors in proper balance. In

cases of mentally illness, they used purgatives and cathartics to eliminate bad humors.

Plato (427-347 BC) & Aristotle (384-322 BC) Plato divided mind into three parts: appetitive, rational and spirit-affective. Madness occurred whenever there was imbalance between these parts. He felt illness could be eliminated by using proper conversation with the sick person using a question and answer format.

Aristotle believed that mental illness occurred due to influences of emotions, black bile and temperature. He was the first to describe various forms of affective disorders.

In ancient Greece *phrenitis* was a term used to explain an inflammation of mind and body, which was replaced, by delirium or confusion in the19th century.

In addition, the Greeks developed three different main forms of treatment- inducing sleep, interpreting dreams, which were performed by priests, and using detail conversation to gain knowledge about the person and his/her illness.

Roman psychiatry

Romans followed teachings of Greeks and believed that unsatisfied desires act on the soul to produce mental illness and that through proper reasoning; mental illnesses could be treated to produce *ataraxia* or lack of perturbation.

Galen (130-200 AD) believed that humors exist in normal and abnormal forms and of four different qualities – cold, hot, dry and moist. These four humors form human temperaments. He added concept of natural and animal spirits besides vital spirits. He believed that diseases occurred due to bad external influences, like bad air or bad diet on an existing predisposition, like abnormal humor. Galen's writings 'On Melancholia' influenced medical thinking for nearly fifteen centuries.

Greeks or Romans never took public responsibility of treating those with mental disorders; so family members restrained most of them at home. The only exceptions of that behavior referred tosoldiers who were admitted to military hospitals.

MIDDLE AGES

In the Middle Ages, demons or malevolent deities entering into body and possessing the soul were thought to be main cause of mental disorders. Astrology was considered a scientific guide for physicians. Some physicians were of the opinion that mental disorders could be caused by somatic or psychological conditions.

Treatment was given by physicians or persons claiming special powers. It consisted in the form of exorcism of demons by magical powers, folk remedies, esoteric medicines, confessing to priest and some treatments recommended by Hippocrates and Galen.

In the Arabic Empire many hospitals were built with psychiatric wings for example at the hospitals in Baghdad (750AD) and Cairo (873AD). They also built a mental asylum in the Spanish city of Grenada (1365AD). This was mainly because the Islam viewed persons with mental disorders as responsibility of society to be cared for in a humane manner.

Christian attitudes towards persons with mental disorders were similar in many ways. Many were

thought to be possessed by demons and were expelled from towns or incarcerated in towers. Simultaneously, many believed that persons with mental disorders were devoid of mind and needed to be cared for. Amongst the first asylums built for the care of persons with mental disorders were those in Hamburg (1375 AD) and in Spain (1409 AD). Around 1400 AD Bethlam hospital in London started admitting patients with mental disorders. Over the next two centuries Bethlam became famous as a madhouse and became known popularly as 'Bedlam'- place of uproar. It was the unique in the sense it pioneered the way in asylum management and care of persons with mental disorders.

DARK AGES

Henry Kramer and James Sprenger in 1486 wrote a publication *Malleus Maleficarum* (Witches' hammer), which described witches as mainly women who showed psychotic or hysterical symptoms and also harbored sexual delusions. The treatment for those women was extreme degree of torture, which would force confessions from those who were accused. This witch-hunting craze, which lasted for almost 150 years, led to killings of thousands of people, mainly women.

SEVENTEENTH CENTURY

Thomas Willis and Thomas Sydenham were two eminent English physicians who along with Zacchia and Robert Burton influenced the conceptualization of mental illness throughout the seventeenth century.

Willis performed autopsies on some of his patients, and showed brain changes in those with brain diseases as opposed to those who were normal.

Sydenham studied hysteria in great detail and felt that it was due to abnormal spirits; he also attempted a classification of mental disorders.

Zacchia marked the beginning of forensic psychiatry and wrote that physicians, rather than lawyers, should examine offenders with mental disorders.

Burton wrote extensively on melancholy in his famous book '*Anatomy of Melancholy*' ,which was considered an authoritative text for a long time.

However, most of the seventeenth century saw incarceration of the persons with mental disorders in mental asylums and other institutions where they were locked up with many others considered social deviants like criminals, prostitutes and homosexuals.

EIGHTEENTH CENTURY

With new enlightenment in science during this century, belief in the power of rational thinking replaced earlier causes for mental disorders.

The French physician Sauvages divided all known diseases into different classes, in which class eight comprises of mental disorders. Within the next two years, William Cullen described his own nosology in which for the first time he used the term neurosis to describe a group of mental disorders.

The German physician Gall developed the science of phrenology which offered views on human nature.

For the most part of this century, the insane in public asylums were considered to have incurable illnesses and were subjected to physical restraints, ill treatment and torture.

Towards the end of eighteenth century, a reform movement changed the harsh treatment regimens in mental asylum settings. The Italian physician Vincenzo Chiarugi, William Tuke, in England and the French physician Phillippe Pinel led this reform movement.

It is generally accepted that the work of Pinel constituted a turning point in the history of psychiatric care.Pinel'smerit was to propose an extensive scientific theory for the humane treatment of persons with mental disorders. In 1801, in his influential book a *Treatise on Insanity,* Pinel proposed a new classification of mental disorders. His work was based on observations made in the Paris hospital of Bicetre. He suggested that mental disorders were a product of heredity and external influences. He developed a regimen of education, persuasion and reasoning for the treatment of persons with mental disorders. This came to be known as 'moral treatment'

EARLY NINETEENTH CENTURY

In the early part of 19th century, leading psychiatrists from Europe and North America were following moral therapy model in practice, and psychiatry became a different specialty.

Most influential in this list was Jean Etienne Dominique Esquirol, who further developed moral therapy and increased the number of mental asylums through out France. He started the first teaching course in psychiatry and trained physicians.

Samuel Tuke, in England, did the same work making the York retreat hospital one of the ideal asylums of that time. At this time, an association of medical officers of hospitals for mental disorders was formed which. With time, the association became the Royal College of Psychiatrists, which in 1853 founded the *Asylum Journal*, today the *British Journal of Psychiatry*. In the United States of America, Benjamin Rush, the father of American psychiatry and the founder of today's *American Journal of Psychiatry*believed strongly in the somatic causation of mental disorders.

The concept of neuropsychiatry developed in Germany at this time, with separate hospital beds for psychiatric patients, laboratories for neuro-physiological and neuro-anatomical research and special wards for neurological cases. Wilhelm Griesinger did pioneering work in developing this discipline and argued that mental disorders were indeed brain diseases. He wrote the book called '*Mental pathology and therapeutics'* (1845).

LATE NINTEENTH AND EARLY TWEBTEETH CENTURY (BEFORE SECOND WORLD WAR)

Two French psychiatrists, Benedict-Augustin Morel and Valentin Magnan proposed the theory of degeneration for mental illness in which they held a view that insanity and many other mental illnesses could be hereditary. The hereditary predisposition could become disease by repeated transmission or activated by external factors. This theory was very influential at the time and was believed by many mental health professionals.

During the same period, the German psychiatrist, Richard von Krafft Ebing developed the science of sexology with writings on sexual perversions, in his famous book *Psychopathia Sexualis*.

Emil Kraepelin had probably the greatest impact on psychiatric practice at the time. He was professor of psychiatry at the universities of Dorpat, Heidelberg and Munich. He observed thousands of patients in his career and classified major psychoses into two groups- manic depressive psychosis, formerly called circular insanity, which he thought to have good prognosis, as compared to a second group, dementia praecox, later known as schizophrenia, which always had downhill course. Hedivided it in three subgroups – *hebephrenia* and *catatonia*, described by E Hecker and Karl Kahlbaum respectively, and dementia paranoia, described by Kraepelin himself.

The Swiss psychiatrist, Eugen Bleuler observed that dementia praecox did not have poor outcome in

every case, so he coined the term schizophrenia and introduced four characteristic features for schizophrenia – *autism*, *ambivalence*, *association difficulty and flat affect*. He also described the schizoid personality.

Manfred Sakel, a Viennese physician, used insulin coma therapy, and Ladislas Meduna produced convulsions by metrazol, which resulted in remissions in the symptoms of schizophrenic patients.

Later, in Italy, in 1938, Ugo Cerletti and Lucio Bini, produced convulsions by means of electric shock, which was named as electroconvulsive therapy, that largely replaced metrazol and insulin in the treatment of schizophrenia. It was also found to be very effective in mood disorders. Today, although rarely advocated largely due to the availability of effective psychtropic drugs and other forms of therapy, it is still used in severe cases ofdepression, particularly when there is suicide risk.

In 1917, the Austrian psychiatrist Julius von Wagner Jauregg produced malaria-induced fever in persons with cerebral localization of syphilis causing remission. For that he became the first psychiatrist to receive the Nobel Prize.

During this period, the German psychiatrist Karl Wernicke and the Russian physician Korsakoff described a syndrome caused by chronic consumption of alcohol. In 1906, the German neuropathologist Alois Alzheimer reported case of progressive psychosis and dementia in a 51 year-old woman with neurofibrillary degeneration and plaques in the brain.

During 1940s to 1950s, two neurologists,Egas Moniz and Walter Freeman, performed lobotomies. This consisted of the destruction of frontal lobe white matter with special instruments on persons with intractable psychosis and obsessive – compulsive disorders. Few patients improved,while many deteriorated due to personality changes.

In the late 19th century, neurosis as a broader term, was further classified into two major types- neurasthenia and hysteria. It was stated that neurosis was not inherited like psychosis, and it was caused by changes in brain function without any organic lesion.

Neurasthenia was the name of a syndrome characterized by mental exhaustion, which replaced the older term hypochondriasis. The term was first used by George Miller Beard and it was treated by rest, massage and electrical stimulation.
In the 18th century, Franz Anton Mesmer practised unrecognised form of hypnosis for the treatment of hysteria and he was successful. He called it as ‘animal magnetism’.

Psychodynamic theories and Sigmund Freud
Sigmund Freud, initially started treating persons with the diagnosis of hysteria with hypnosis. He diagnosed these patients as having different clinical conditions, which he named as anxieties, obsessions and phobias. He developed a new treatment method for these patients involving free association of thoughts and interpretation of dreams, which he called ‘psychoanalysis’.
He published. extensively, such as on the psychosexual stages of human development and various disorders associated with abnormal sexual development.

An important factor in the spread of psychoanalysis in the West was the immigration of many German and Austrian psychoanalysts to the United States of America as a result of the Nazi persecution during the Second World War.

The concept of mental hygiene originated in 1919 when Clifford Beers in the USA formed an organization, which emphasized the role of social factors in the origin of mental illnesses and called for a preventive approach. One of the consequences of this work was that social work became a recognized profession.

This period also saw the expansion of the field of clinical psychology. The Binet-Simon scale for intelligence developed in 1905 marked first clinical instrument in this category. Further in 1921, Herman Rorschach developed projective test using inkblots.

FROM THE END OF THE SECOND WORLD WAR TO THE BEGINNING OF 21ST CENTURY

Social reformation

The social reform after the Second World War triggered major institutional changes in psychiatry with strong belief that social factors play a major role in the causation (aetiology) of mental disorders. It was felt that integrating patients in community or treating those in community would help improve the prognosis of their mental disorders

The most important reform that occurred was the decline of the mental asylums mainly in developed countries. This was accompanied by the formation of multi-disciplinary teams, including psychiatrists, psychologists, social workers, nurses and occupational therapists. Special hospitals like day care centres and workshops were increased, and most of the admissions were to psychiatric wards in general hospitals rather than in mental asylums.

Concerns about human rights led to a process of de-institutionalization, leading to closure of mental asylums and an expansion in community based care.

Biological approach in psychiatry

Since 1950, there has been a great expansion in biological research and newer treatment modalities. Though psychotropic drugs like opiates, bromides, barbiturates were in use since many centuries, they were seldom or never used for mental disorders. Thus the therapeutic “revolution” in the form of newer drugs had modified the practice of psychiatry in last 60 years.

The “revolution” started with the discovery of chlorpromazine in 1952 for schizophrenia and other psychotic conditions. This was preceded by the finding that lithium salts reduced symptoms of mania but its actual use started a few years later. The year 1957 saw the development of antidepressants drugs, like imipramine and mono-amine oxidase inhibitors.

Thus this remarkable decade saw the development of four distinctive classes of drugs for different mental disorders- anti psychotics, anti depressants, anti anxiety and mood stabilisers.

The drive to develop newer drugs continues with many newer anti psychotic and antidepressants in clinical practice today. Selective serotonin reuptake inhibitors, like fluoxetine, sertraline and paroxetine were developed by different pharmaceutical companies around 1987.

Along with the development of drugs and biological research, there have been advances in the classification of mental disorders with two main classifications – Diagnostic and Statistical Manual (DSM) of the American Psychiatry Association and the International Classification of Diseases (ICD) developed by the World Health Organisation. Thesetwo systems are in periodic revisions.

In last 30 years, care of persons with mental disorders has become predominantly community based in most countries.

Summary

The above extremely brief review provides an historical perspective the changes in the care and treatment of persons with mental disorders. In the Middle Ages, European countries viewed mental problems as having supernatural causes associated with demonic or divine possession. The early seventeenth century saw the rise of secular explanations of madness as a physical state. Increasing numbers of poor people with mental disorders were confined in public jails, workhouses/poorhouses, public and private asylums across Europe and the United States. The early medical explanations of madness did not encourage compassion or tolerance, but, rather, it implied that this impaired physical state was self-inflicted due to an excess of passion. The rise in humanitarian concerns in the 18th century led to many institutions introducing a moral treatment program.

The success of moral treatment led to a massive program of building asylums in the European countries and United States. However, most of these large public institutions were unable to replicate the success of the dedicated pioneers of moral treatment. Financial constraints, high number of patients and the lack of a cost effective alternative to moral therapy meant that these state mental hospitals quickly became custodial institutions, particularly for the poor. The discrediting of mental asylums on humanitarian grounds led to the growth of community care movement in Europe, in North America and in some Latin American countries and Australia. This process of reducing the number of chronic patients in state mental hospitals, downsizing and closing some hospitals, and emphasising alternative forms of treatment settings has been termed de-institutionalisation.

In many developing countries western-style mental health services began with the state or colonial power building mental hospitals in the late nineteenth or early part of the twentieth century. In general, the mental hospital system has generally been less comprehensive in terms of population coverage in developing countries in comparison to developed countries. Thus problems associated with institutionalisation in the developed countries have to some degree been avoided in those developing countries where a mental hospital system was only marginally in place or non-existent.

Current Understanding of The Main Types Of Mental Disorders

A) **<u>Identification of mental disorders</u>**
Mental and behavioral disorders are understood as clinically significant conditions characterized by alterations in thinking, emotions or behavior associated with personal distress and / or impaired functioning.

Mental disorders are clearly abnormal or pathological. To classify as mental disorder, abnormalities have to last a certain period of time (cf. DSM-IV; ICD-10)and above all they have to cause from minor to severe impairment in personal, social, and occupational functioning.

Mental disorders always have definite and specific signs with more or less predictable natural course, when there is no intervention.

B) **<u>Concepts of mental disorders</u>**
There are three different ways of defining mental disorders:
1. **Absence of health**
The term health is difficult to define. However, the World Health Organization defined health as 'a state of compete physical, mental and social well-being, and not merely absence of disease or infirmity.'

2. **Presence of distress**
This has practical value in that person who suffers or has problem will consult doctor but this will not be true in certain mental disorder, especially where there is loss of insight. Such individuals may not accept they have a mental disorder and may refuse to seek medical help for the same.

3. **Pathological process**
At an extreme, it can be argued that to qualify for a disorder, there should be demonstrable physical pathology. Unfortunately, we do not have yet such evidence for many mental disorders at this time (but progress is being made through imaging of the brain and other techniques) and thus cannot be used as a basis for diagnosing mental disorders.

C) **<u>Classification of mental disorders</u>**
As in every branch of medicine, classification is needed for the following three purposes:
To enable clinicians from different part of the world to communicate regarding diagnosis, prognosis and treatment;
To ensure that research can be conducted with comparable group of patients; and
To enable epidemiological studies that seek the bases for research and planning services.

Classification is important to increase the reliability and validity of mental disorder diagnosis across countries and cultures. In general, disorder as a term is used to imply the existence of a clinically recognizable set of symptoms, signs or behavior associated in almost all most cases with distress and interference with personal functions.
Any classification of mental disorders classifies syndromes and conditions, but not individuals. Individuals may suffer from one or more disorders during their lives, including concomitantly (co-morbidity), but the diagnostic label should not be used to describe an individual. A person should never be equated with a disorder – physical or mental.

Mental disorders can be classified in many different ways, depending on symptoms, course/severity or outcomes or based on etiological or treatment similarities.

Based on symptoms –

1. Psychoses (e.g., schizophrenia, delusional disorders),
2. Mood disorders (e.g.,depression, bipolar disorder),
3. Anxiety disorders (e.g., post-traumatic stress disorder, panic disorder, obsessive compulsive disorders, phobias),
4. Somatoform disorders (e.g., somatisation disorders, dissociative disorders, and hypochondriasis) ,
5. Organic mental disorders (e.g., delirium, and dementia)
6. Developmental disorders (e.g., autism, learning disorders).

Based on course/severity –
Severe mental disorders (e.g.. schizophrenia, bipolar disorder)
Common mental disorders (e.g.. depression, anxiety disorders).

Based on aetiology - groups based on a common cause e. g. Depression spectrum disorders including depression and panic disorders or schizophrenia-spectrum disorders such as schizophrenia and schizoaffective disorders)
Based on similarities in treatment - e.g. Obsessive compulsive spectrum disorders which all respond to particular medications (SSRI).

Earlier, there were different ways of classification but at present there are two accepted classification systems across the globe namely –

International Classification of Diseases – 10 – Chapter V
Diagnostic and Statistical Manual IV – TR

These classification frameworks, which are under revision, give a complete list of mental and behavioural disorders along with detailed diagnostic criteria for each disorder. These guidelines carry no theoretical implications, and they do not pretend to be comprehensive statements about current knowledge of the disorders. Thus they can be easily used for clinical, educational and research purpose in most cultures.

The above situation reflects the fact that we still do not know enough about the causes of most mental disorders. Most mental disorders are only specified at a syndrome level (that is, a collection of group of symptoms and signs occurring together which may have multiple underlying causes) rather than at a disease level (that is a specific group of symptoms due to a unitary cause).

D) **Neurosis and psychosis**

In the past, the concepts of neurosis and psychosis were included in most systems of classifications. But presently neither of these is included in current classification.

The term psychosis was introduced by Feuchterleben in 1845. The term neurosis was suggested by Cullen to denote diseases of nervous system, but its meaning changed in due time.

Presently, psychosis refers to severe forms of mental disorder, such as organic mental disorders, schizophrenia and some affective disorders.

The characteristic symptoms of it are delusions, hallucinations, and disorganization in behavior and speech. Lack of insight was said to be a central feature of psychosis but the term insight is difficult to define and understand. A more easy and straight criterion is the person's inability to distinguish between subjective experience and reality. Thus, this loss of touch with reality is central to psychosis.

Similarly, the term neurosis, which refers to less severe disorders and has symptoms close to normal states e.g. anxiety, face similar objections.

It is for these reasons that the neurosis-psychosis dichotomy, which was a fundamental principle in older classifications, was abandoned in present classifications. Still in ICD- 10 the term neurosis is retained for one group of disorders.

E) **Common disorders** -
In the next section salient features of the some common mental disorders are described.

Depression
Depressive feelings are common, but depressive disorder is diagnosed only when the symptoms reach threshold. It can vary in severity from mild to very severe.

Characteristic symptoms of depression are –
Sadness / low mood.
Loss of interest in all pleasurable activities
Decreased energy,
Loss of confidence,
Inappropriate guilt,
Thoughts of death and suicide,
Reduced concentration,
Reduced or increased sleep and appetite.

These problems can become chronic or recurrent, and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities. At its worst, depression can lead to suicide, a tragic fatality associated with the loss of about 8,50,000 thousand lives every year.

Epidemiology and burden on society
Depressive disorders place an enormous burden on society.
The global burden of disease (GBD) 2000 estimates that the point prevalence for depressive disorders to be 1.9% for men and 3.2% for women.I would suggest to quote the World Mental Health Survey conducted in 28 countries
Depression occurs in men and women all ages and backgrounds. But commonly it affects in middle life, and women outnumber men.

Depression is the leading cause of disability as measured by years lived with disability (YLDs) and the 4th leading contributor to the global burden of disease, measured by disability-adjusted life years (DALYs) in 2000.
By the year 2020, depression is projected to reach 2nd place of the ranking of DALYs calculated for all ages, both sexes. Today, depression is already the 2nd cause of DALYs in the age category 15-44 years for both sexes combined.
The DALYs will increase from 4.4% to 5.7% in the near future causing enormous burden to the society.

Depression can be reliably diagnosed in primary care. Antidepressant medications and brief, structured forms of psychotherapy are effective for 60-80 % of those affected and can be delivered in primary care. The WHO has developed well-formulated guidelines of care.
However, fewer than 25 % of those affected (in some countries, less than 10 %) receive such treatments. Barriers to effective care include lack of available services, lack of trained providers, and the social stigma associated with mental disorders, including depression.
Primary care-based quality improvement programs for depression have been shown to improve
1. Quality of care,
2. Satisfaction with care'
3. Health outcomes,
4. Functioning,
5. Economic productivity,
6. Household wealth at a reasonable cost.

Most often used treatment options

1. Drugs.At present there are several classes of drugs to treat depression.
2. Modified electro-convulsive therapy is another modality of treatment with particular effectiveness in suicidal depression.
3. Psychological treatment. It include various forms of psychotherapies like cognitive, behavioural or interpersonal..

WHO has recently launched an initiative on Depression in Public Health. The objectives and planned activities of this project are explained below.

Overall objective: To reduce the impact of depression by closing the substantial 'treatment gap' between available cost-effective treatments and the large number of people not receiving it, worldwide.

Specific objectives:

1. To educate patients, family members, providers, and policy makers about depression.
2. To reduce the stigma associated with depression.
3. To train primary care personnel in the diagnosis and management of depression.
4. To improve the capacity of countries to create policies supportive of improving care for depression and to provide effective management of depression in primary care.

Activities required to improve care –

1. Global, regional, and national events to increase awareness of depression.
2. Production and dissemination of resources for improving depression care.
3. Regional and national workshops to strengthen the capacity to care for depression.
4. Multi-site intervention studies to improve the primary care for depression.

Schizophrenia

Schizophrenia is a severe mental disorder with a variable course. The disturbance involves most basic functions that give a normal person a feeling of individuality, uniqueness and self-direction.

Clinical picture

Delusions and hallucinations is important feature of this disorder. Delusion is false, firm, fixed unshakable beliefs while hallucinations are perceptions without any stimulus(e.g., hearing voices with no person around).

Residual problems seen include

1. Lack of initiation at work and daily activities,
2. Poor social interaction, withdrawn to self
3. Poor self care and hygiene

These problems are difficult to treat and to manage by doctors and carers and obviously increase the burden of an illness in terms of economic and social cost to the family and the society. Residual symptoms can cause continued disability and poor quality of life.

Clinically, schizophrenia can be divided into acute and chronic on the basis of positive and negative/residual features. The 'positive features' includes delusions, hallucinations, thought disorder, disorganized speech and behavior. The "negative features" include asociality, negativism, mutism, avolition and apathy.

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Course and prognosis

Overall, more than one third of the persons with schizophrenia make a complete recovery, one third remains in partial remission and require prolonged treatment while the remaining thirdmay require life long management or resistant cases. An acute episode is said to have better prognosis than a chronic disorder

The amount of social stimulation and rehabilitation, continuous psychotropic care, the social background of the person, degree of intelligence and age of onset are the factors which can modify the overall clinical picture of the disorder.

Similarly, lack of social awareness and presence of the social associated with schizophrenia delay the initiation of treatment. Furthermore, persons with schizophrenia may sometimes lack awareness of being ill and may therefore not adhere with the prescribed treatment. Both these factors can lead to a poor prognosis and outcome.

Schizophrenia has a better outcome in developing countries as compared to developed countries. This may be due to:

1. Stronger family and social support
2. Fewer social and family demands on the person with the disorder.

Epidemiological studies indicate that schizophrenia reduces life expectancy by 10 years, and almost 10% of persons commitsuicide.

Epidemiology

Schizophrenia is a disorder with low incidence (about 3 per 10,000 persons), but a relatively high prevalence (up to 1 per 100 persons).

Facts
Schizophrenia affects about 24 million people worldwide.

More than 50% of persons with schizophrenia are not receiving appropriate care.
90% of people with untreated schizophrenia are in developing countries.

Care of persons with schizophrenia can be provided at community level, with active family and community involvement.

Causes
Overall, genetic factors are most strongly supported by the existing evidence but environmental factors like early infections and stress are likely to play part in its development. Though the environmental causes remain uncertain, neurological damage at the birth has been suggested. Also interpersonal and social influences are important. These are predisposing causes. Among the precipitating causes stressful life events are most important, while social and family influences play an important role as perpetuating factors.

Treatment options
There are effective interventions (pharmacological and psychosocial) available and the cost of treatment of a person suffering from chronic schizophrenia is about US$2 per month; the earlier the treatment is initiated, the more effective it will be. However, the majority of the persons with chronic schizophrenia do not receive treatment, which contributes to the chronicity.

Drugs are available in two different classes and called 'antipsychotic' drugs. The selection of the drug depends mainly on the side effect profile and past or family history of treatment.

Psychosocial treatment also plays an important role in the course and prognosis of an illness. Main psychological approaches are

Psychoeducation of the person and his/her family
Supportive therapy
Compliance and Insight oriented psychotherapy
Cognitive Behaviour Therapy

In chronic conditions, psychosocial rehabilitation, which includes social skills training, vocational training, housing, self-care management, along with drugs is the main stay of treatment.

Pilot programmes in a few developing countries (e.g. India, Iran, Pakistan, Tanzania, Guinea-Bissau) have demonstrated the feasibility of providing care to people with severe mental illness through the primary health care systems by:

appropriate training of the primary health care personnel;
provision of essential drugs;
strengthening of the families for home care;
referral support from mental health professionals, and
Public education to decrease stigma and discrimination.

Bipolar mood/affective disorders

Bipolar affective disorder is an episodic illness with episodes of depressive and mania cycleswith partial or full symptom free intermittent periods.

Bipolar disorder has a prevalence rate of 0.1% -0.4% and it is expected to show rising trends in next 20 years. The lifetime risk for bipolar disorder lies between 0.3 and 1.5%. The prevalence in men and women is the same. The mean age of onset is about 21 years and illness is highly co morbid with substance use and anxiety disorders.

Depressive episodes have similar features as described earlier. Episodes of mania have the following features:

1. Elated mood,
2. Increased activity / energy,
3. Over confidence,
4. Reduced need for sleep,
5. Over familiarity,
6. Impaired concentration,
7. Over spending.

Course and prognosis

The age of onset is usually in the second decade, but it can start in the third decade of life too. The average length of a manic episode is about 6 months. At least 90% of patients with mania experience further episodes. On an average, bipolar patients experience about 10 episodes in 25 years follow up study. Nearly all bipolar patients recover from acute episodes but long term prognosis could be rather poor. The best predictor of the future course is the history of previous episodes. An early age of onset and incomplete symptomatic remission are important risk factors.

Treatment modalities aim at reducing symptoms and preventing relapses or recurrences.
Drugs. Mood stabilisers like lithium, valproate and carbamazapine are the mainstay of the treatment.

Electroconvulsive therapy is also effective modality particularly in acute cases.

Psychological approaches like supportive, insight oriented, cognitive and compliance psychotherapies are useful in preventing relapses.

Suicide

For every suicide it is estimated that more than 30 non fatal episodes of self harm occur. Depression, schizophrenia and substance misuse are more common in people who deliberately harm themselves and the rate of suicide in the year following an episode of deliberate self harm is 100 times than that of general population. The rate of suicide is also high after discharge from psychiatric in patient hospitalisation.

Suicide is an act deliberately initiated and performed by a person in the full knowledge or expectation of its fatal outcome. It is a major public health problem. It is said that most completed suicides are planned.

Geographically, changes in suicide rates vary considerably. Overall, rates of suicide are on increase in last five decades. Generally, higher rates are reported in eastern and northern European countries, and lower rates in Mediterranean countries. Reported suicide rates in Islamic countries of the Middle East are very low. The sex differences are less in Asia than in Western countries; while methods used reflect local culture and availability of the method.

Demographic characteristics which predict the risk of suicide include the following

1. Suicide is three times more common in men than women.
2. The highest rates are in elder population in both sexes.
3. The rates are highest in unmarried, widowers and the divorced.
4. They are high in unemployed population and particularly high in certain professions, like farmers and medical practitioners.

Causes of suicide

Medical factors –Certain mental disorders (see above) abnormal personality are important factors.

Social factors

1. Economic prosperity and depression - Though socioeconomic crisis is an important precipitating event for increase in rates of suicide. However, increases in suicide rates have been observed in periods of socioeconomic stability also. It is very difficult to find a common explanation for this diverse variation.
2. High unemployment, poverty and social fragmentation are other important factors.
3. Media coverage of suicide

Biological factors

There is a strong association between suicide and impulsivity and aggression.

There is evidence of under-functioning of the brain serotonergic system in persons who commit suicide.

Following are the treatable and preventable factors

1. Alcohol consumption and untreated depression
2. Easy access to firearm and toxic substances
3. Schizophrenia and other mental disorders.

Myth about suicide

It is always wrongly believed that people who talk of suicide would never commit. Research over last many years suggests that two thirds of those who die of suicide have told someone of their intentions.

Final acts:These are the actions (planning) taken by a person before committing suicide.

1. Suicide note
2. Making a will or power of attorney

Management of suicidal patient in community

1. full assessment of patient and relatives, including review of the suicidal risk
2. organization of adequate social support
3. regular review
4. Appropriate psychiatric treatment

Prevention of suicide

Primary

1. better and more available psychiatric services
2. restricting the means of suicide
3. educational programmes
4. restricting opportunities for imitation

Secondary

1. better and more available psychiatric care
2. crisis centers and hot lines

Deliberate self harm (DSH)

Definition – Kreitman (1977) defined DSH as a non-fatal act in which an individual deliberately causes self injury or ingests a substance in excess of which is prescribed.

A) Deliberate self-poisoning – this is the most common cause for DSH. Aspirin and paracetamol are most common drugs used for ingestion.

B) Deliberate self-injury – The most common method is laceration – cutting wrists or forearm is most common in this group.

Factors that suggest high suicidal intent:

These are the factors which suggests high risk of suicide in future after an act of deliberate self harm -

Act carried out in isolation

Precautions taken to avoid discovery

Final acts performed (making a will)

Preparations made for the act

Communicating intent to others

Leaving a note

Not alerting helpers after the act

Dangerous method – hanging, Gun shot.

Management of DSH

The major aim of treating these patients is enable a person to resolve the difficulties or problems which led to an act and secondly, to deal with any future crisis.

Thus suicide prevention is hard task to follow. The main focus should be on educating primary care physicians and public, reducing availability of methods of suicide, responsible media reporting. The value of these various approaches remain uncertain but

this will contribute to better understanding of this major public health problem and improve the possibilities of prevention.

Substance use disorders

Alcohol and other drug use is common and increasing public health problem. Commonly used substances include alcohol, nicotine, cannabis, cocaine, opioids, sedatives or anxiolytics; the prevalence of substance use is increasing with changing social norms, increasing life stress and easy availability of drugs. This is more so in developing countries, which adds to health and social burden in these countries.

Epidemiology

According to WHO, 40-50% of people use alcohol and 10-20%of them are dependent on them. The use of nicotine is also in similar range and for both substances prevalence amongst women is increasing all over the world. Prevalence of other drug use such as heroine, cocaine and cannabis is 0.4% to 4%.

Terms used in substance use disorders –

Intoxication – This is a transient phenomenon due to recent ingestion of substance leading to clinically significant behavioral and physical changes. These effects disappear once substance is eliminated from body.

Abuse or harmful use – The term abuse is mentioned in DSM – IV while harmful use in ICD – 10, both refer to maladaptive patterns of substance use that harm health in broader sense.

Dependence – it is characteristic physical and psychological phenomena induced by repeated consumption of drug.

This can be a diagnosed using following criteria

Strong desire to take substance

Gradual reduction in alternative interests in life

Withdrawal – This is a group of symptoms and signs occurring when a drug is reduced in amount or withdrawn suddenly.

Tolerance – is a physical or psychological state in which after repeated administration, a drug produces a decreased effect or increasing doses are necessary to result in similar effect.

These terminologies are used for every substance use disorders.

In the past, the term alcoholism was used which is now replaced by alcohol dependence syndrome. However, to use the term 'alcoholic' has a pejorative meaning, suggesting behavior that is morally bad. The term 'problem drinking' is used for those in whom drinking has caused an alcohol related disorders.

Alcohol use is rising rapidly in some developing countries. Changing social trends are also leading to a rise in the use and abuse of drugs such as cannabis, cocaine and opiods.

Using injectable drugs is a major risk towards spread of infections like Hepatitis B, Hepatitis C and HIV. The prevalence of HIV among injectable drug users is 20-80% in many cities.

It is very difficult to distinguish exactly when a person becomes dependent on a substance, and there is evidence that dependence is not clearly demarcated category but that it happens along a continuum, from early problems to severe dependence with physical, mental and socioeconomic consequences.

While deciding to experiment with a psychoactive substance use is usually a personal decision, developing dependence after repeated use is not a conscious and informed decision by the individual or the result of moral weakness, but the outcome of a complex combination of genetic, physiological and environmental factors.

There is also evidence of neurochemical changes in the brain associated with and indeed cause many of the characteristics of substance dependence. Substance dependence should be viewed as a complex mental disorder with a possible basis in brain functioning.

Management / prevention – the principles for treatment for early drug misuse are

- early detection of a misuse
- brief intervention to raise awareness of impending problem
- motivational interviewing which uses empathy and avoids confrontation
- psychological support and advice

Steps for treating dependence

1. Management of withdrawal / detoxification – it is different for every substance.
2. Abstinence – controlled or total – this is only true for alcohol use. For all other substances it has to be total abstinence.
3. Psychological and drug treatment for relapse prevention
4. Self- help organizations like Alcoholics Anonymous (AA) have better outcome rates than other options.

But the overall results for alcohol dependence are not encouraging and the rate of abstinence with all ideal treatment strategies is only 50% in first year which drops gradually in next years.

Child and Adolescent disorders

The Surgeon General Report of the USA (2001) stated that one in ten young people suffer from mental illness severe enough to cause some level of impairment, yet fewer than one in five receives the needed treatment.

Contrary to popular belief mental disorders are common during childhood and adolescence.

ICD-10 identifies two broad categories specific to child and adolescence. Childhood and adolescence being developmental phases of life, it is difficult to draw clear line between phenomenon that is part of normal development and others that are abnormal.

Disorders of psychological development

1. Dyslexias (Reading and spelling disorder)
2. Autistic spectrum disorders.

Behavioral and Emotional disorders –

1. Attention deficit and hyperactivity disorder
2. Conduct disorder
3. Emotional disorder.

Alzheimer's Disease

Dementia is an acquired, usually progressive, impairment of intellect and personality, which frequently becomes generalised with no alteration in consciousness.

Most of these cases are irreversible and have gradual downgrading course.

Point prevalence rates for populations over 65 years old range from 2 to 7% for moderately or severely affected individuals. This increases rapidly as age advances. These rates double with every additional five years of age from about 15 at 65, rising to about 30.to 40% at age 90.

Alzheimer's disease is more common diagnosed in developed nations.

With the aging populations, especially in developed nations, the percentage of DALYs and economic cost to the society due to AD is likely to show rapid increase in the next 20 years.

Clinical picture

The first indication of the condition is often minor forgetfulness, which is difficult to distinguish from normal aging. The condition progresses gradually over first few years adding to memory disturbance. Language is affected with difficulty in naming objects and finding words. There is gradual difficulty in learning new things like finding the way round unfamiliar environments, for example – on holiday.

Other associated features include

Mood features – commonly present are depressive features and anxiety.

Hallucinations – Person has more visual hallucinations than auditory one.

Irritability and aggressive behaviour.

Gradual decline in self - care and social behavior.

Causes

Though numbers of factors like metabolic and neurochemical abnormalities have been suggested, the exact cause remains unknown but there is strong genetic linkage causing certain neuro-pathological changes in brain. These changes in the brain are irreversible and cause gradual and progressive damage. Neurochemical studies in Alzheimer's disease have shown loss of many regions of the brain depleting various neurotransmitters but most important one is the depletion of acetylcholine.

Treatment and care of persons with Alzheimer's Disease

Principles of management

Proper assessment and confirmation of diagnosis

Drugs to halt the progress of an illness

Drugs to reduce anxiety, Depression, Agitation, Insomnia

Psychosocial intervention

a) Educating the person and their carers about the illness and its course especially in early stages of an illness

b) Supportive treatment – self-care, social interaction, memory disturbances etc.

c) Education and support to caretakers

Current understanding of diagnosis, causes, treatment and care of persons with mental disorders

Introduction

The last 50 years have seen an improvement in the methodology for diagnosing mental disorders. Mental disorders are now diagnosed using clinical methods that are similar for diagnosing physical disorders. The use of standard diagnostic criteria, uniform definition of symptoms and signs and the use of structured interview schedules has led to a high degree of reliability and validity of diagnosis of mental disorders. The World Health Organisation's ICD-10 classification of mental and behavioural disorders gives a complete list of mental and behavioural disorders along with detailed diagnostic criteria for each disorder.

It is now generally accepted that mental disorders are caused by a interaction of biological, psychological and social factors. Mental and behavioural disorders have a biological basis in the brain. Mental disorders such as schizophrenia and depression are associated with abnormalities in neural communications. There is also a significant component of genetic risk in almost all mental disorders, however studies have demonstrated that this risk is genetically complex and requires specific environmental stressors to elicit the pathology. Examples of environmental factors range from malnutrition, infection, disrupted family environments, neglect, isolation and trauma.

Individual psychological factors are intrinsically linked to development of mental disorders. Childhood lack of care may lead to a sequence of events leading to low self-esteem, involvement with unstable adult partners, lack of emotional support and poor coping skills all of which act as risk factors for adult depression. Similarly, stressful life events and negative family environment can precipitate relapse in persons with schizophrenia.

Social factors have a direct relationship with mental disorders. For example, people living in poor housing conditions such as in shacks or extremely dense housing developments as well as those who are homeless are at increased risk for developing mental health problems. Unemployment also is associated with significant increase in the risk for mental health problems. Urbanisation brings along increased homelessness, poverty, overcrowding and higher levels of pollution, disruption in family structures and loss of social support, all risk factors for mental disorders. Increasing numbers of people all over the world are exposed to armed conflicts, civil unrest, wars and natural and artificial disasters leading to displacement, homelessness and poverty. Research shows that those exposed to violence are more likely to suffer from mental disorders such as post-traumatic stress disorder, depression, drug and alcohol abuse and increased rates of suicide.

However there are grounds for optimism too. Clinicians now have access to more effective medications that hasten recovery from symptoms of mental disorder and prevent relapse. A combination of psychosocial and psychological treatments with medications has shown to be effective in recovery from a variety of mental disorders such as schizophrenia, depression and anxiety disorders. Modern treatments have meant that many persons with severe mental disorders can continue to live and work in the community. The challenge is to make these treatments widely available to all and to bring about lasting social changes for primary prevention of mental disorders.

1. Diagnosing Mental Disorders
2. Understanding Mental Disorders – Causes
3. Interface between Physical and Mental Disorders

4. Ingredients of mental health care
5. Principles of care of persons with mental disorders

Diagnosis of mental disorders

Mental and behavioral disorders are identified and diagnosed using clinical methods that are similar to those used for physical disorders.

Advances have been made been during recent decades in standardizing clinical assessment and improving the reliability of diagnosis.

Structured interview schedules and diagnostic symptom/sign checklists allow mental health professionals to collect information using standard questions and pre-coded responses.

ICD – 10 is international classification of diseases in which chapter V describes classification of mental disorders. It was published by WHO and used widely in the Europe, Australia and most of the Asia. While Diagnostic and Statistical Manual of Mental Disorders – IV (TR) is an American Psychiatry Association Publication and also widely used.

ICD – 10 has four different versions –

1. Clinical descriptions and diagnostic Guidelines
2. Research Diagnostic Criteria
3. Primary care Version
4. Multi axial System

Thus ICD- 10 contributes to education, acceptable in research, suitable for international communication and reference for other classifications. Also it is available in all widely spoken languages.

Thus, it has few advantages over DSM –IV (TR). Though there is comparative reliability in ICD- 10 and DSM –IV.

ICD – 10 satisfies both European and Third World Countries. For planning purposes it would be of great interest to compare administrative data from different countries and regions in conjunction with psychiatric diagnoses in which ICD – 10 plays greater role.

DSM –IV is characterized by operationalzed diagnosis. It is in multiaxial format, single document and in English only. But it covers all disorders in detail and provides good reliability for clinical diagnosis.

Causes of Mental Disorders

There is still much to be learned about the specific causes of mental disorders. For years, scientists have argued over the relative importance of genetic versus environment in the development of mental disorders. In general they are said to be have multiple causes including genetic, biological and environmental, for example, exposure to stressors during early development is associated with increased likelihood of depression later in life.

Advances in science and better knowledge about the working of the brain is providing definitive proof for the biological basis of mental disorders for example, Schizophrenia and Depression are associated with abnormalities in neural communications. In case of drug dependence, alterations in neural circuits can produce long term alterations in thinking, emotion and behaviour.

Similarly, after human genome mapping, there are definitive proof regarding genetic aetiology of mental disorders. However studies have demonstrated that this risk is genetically complex.

Simultaneously, one can not ignore environmental factors and in general environmental factors add up to genetic predisposition to cause the disorder. These environmental factors include malnutrition, infection, disrupted family environments, neglect, isolation and trauma to name just a few.

Psychological factors relate to mental disorders in different ways: They can be major causative factor in development of mental disorder for example, childhood lack of care may lead to a sequence of events leading to low self-esteem, involvement with unstable adult partners, lack of emotional support and poor coping skills all of which act as risk factors for adult depression. Alternatively they are main factors in maintaining illness or in causing relapses. For example stressful life events and negative family environment are causative for relapse in persons with schizophrenia.

Mental health consequences of social change are not the same for all segments of a given society. Changes usually exert differential effects based on economic status, sex, race and ethnicity. The relationship of social factors with mental disorders is both ways. As adverse social conditions can increase stress and lead to mental ill health. Similarly, mental illness can downgrade the socio-economic status of the person which again add up to persisting problem.

Urbanisation brings along increased homelessness, poverty, overcrowding and higher levels of pollution, disruption in family structures and loss of social support, all of which are proven risk factors for mental disorders.

Similarly, rural life is also fraught with problems for many people with isolation, lack of transport and communications, and limited educational and economic opportunities are common difficulties.

The relation of mental disorders with poverty can be explained in both ways, by higher causation of disorders among the poor and by the drift of the mentally ill into poverty. If sufficient social support is not there, which is often the case in developing countries, impoverishment is quick to develop.

Increasing numbers of people all over the world are exposed to armed conflicts, civil unrest, wars and natural and artificial disasters leading to displacement, homelessness and poverty.

Poor and the deprived have high prevalence of mental disorders, including substance use disorders.

Research shows that those exposed to violence are more likely to suffer from mental disorders such as post-traumatic stress disorder, depression, drug and alcohol abuse and increased rates of suicide.

There is also evidence that the course of mental disorders is determined by the socioeconomic status of the individual, pointing towards barriers faced by certain socioeconomic groups in accessing care.

Across socioeconomic levels, the multiple roles that women fulfill in society put them at greater risk of experiencing mental and behavioural disorders. Violence against women constitutes a major social health problem, which can be preventable.

The available evidence indicates that people long targeted by racism are at heightened risk of developing mental disorders.

Relationship between physical and mental disorder

It is now widely acknowledged that relationship between mental disorders and physical disorders is complex and reciprocal and that it acts through multiple pathways. e.g. reduced life expectancy of persons with schizophrenia.

The artificial separation of biological from psychological and social factors has been formidable obstacle to a true understanding of mental disorders. In reality, these disorders are similar to many

physical illnesses in that they are the result of a complex interaction of all these factors.

Chronic physical conditions like diabetes, heart related problems and cancer can easily cause or precipitate different mental illnesses For example the of rate of depression in cancer patients is almost 50%, and rates of suicide are much higher than general population.

Three fundamental ingredients of management:
Medication or Pharmacotherapy
Psychotherapy
Psychosocial rehabilitation.

The management of mental disorders – perhaps more particularly than the management of other medical conditions – calls for the balanced combination of three fundamental ingredients as mentioned.

The rational management of mental and behavioral disorders needs a skillful titration of each of these ingredients. The treatment should be tailored to individual needs; but these change as the disease evolves and as the patient's living conditions change.

The most important factor in psychiatric treatment is issue of adherence or compliance with treatment. The probable causes for this non or poor adherence to the treatment are

1. Lack of awareness about the illness, its causes and treatment
2. Due to the social stigma attached with the mental disorders, family members either delay the treatment or discontinue it early.
3. Widespread myths about the causation and treatment of the mental disorders delay the treatment.

There are **four classes of drugs available** –
Antipsychotics for psychotic symptoms
Antidepressants for depression
Mood stabilizers for bipolar illness
Anxiolytics or Tranquillizers for anxiety.

Newer drugs are generally costly and less efficacious than their older counterparts, but are more tolerable due to lesser side effects. There is an issue of lack of access to newer medications in developing countries due to the high costs of these medicines.

The main objectives of giving drugs are to reduce and control the illness and secondly, to prevent relapse of the same.

Psychological treatments are defined as planned and structured intervention aimed at influencing behavior, mood and emotional patterns of reaction to different stimuli through verbal and non-verbal psychological means.

Behavior therapy is based on the principles of learning / conditioning, while cognitive interventions aim at changing thought patterns by different techniques. Interpersonal therapy centers around four problem areas: role dispute, role transition, unresolved grief, and social deficits. Relaxation aims at a reduction of the arousal state – hence, of anxiety – to acceptable levels through variety of muscular relaxation, derived from yoga, autogenic training and biofeedback.

Psychotherapy can contribute significantly to reduce rates of relapse, less hospitalization, and decreased unemployment.

Rehabilitation is the process that helps individuals with an illness reach optimal level of functioning in the community.

It is a comprehensive process not just a technique.

Psychosocial rehabilitation enables many individuals to regain the practical skills needed to live and socialize in community, and teaches them how to cope with their disabilities.

For example – it teaches living skills, such as diet, personal hygiene, cooking, shopping, financing, housekeeping and using various means of transport.
It is the important factor in the community based treatment. Rehabilitation aims to achieve the following:
Consumers' empowerment
Reduction of discrimination and stigma
Improvement of individual social competence
Creation of long term system of social support.

Social And Economic Costs Of Mental Disorders:

Introduction

Mental disorders affect people in all regions, countries and societies, across the life span. Mental disorders are truly universal in that they affect all people – men and women, urban and rural, the rich and poor, in industrialised countries and the developing countries. Mental disorders have a point prevalence (at a point in time) of 10% for adults. On the other hand, surveys have shown that 25% of adults will develop one or more mental and behavioural disorder during their entire life time.

One way of estimating the cost of mental disorders is to look at the global health burden. Traditionally this has been measured only in terms of incidence and prevalence and mortality. These measures substantially underestimate the burden of mental disorders, because mental disorders cause morbidity and disability rather than premature death.

Publication of the World Development Report : Investing in Health (World Bank 1993), the development of Disability Adjusted Life Year (DALY) measure to estimate the global burden of disease and the Years Lived with Disability (YLD) measure to estimate disability have all served to highlight the substantial underestimation of the burden of mental health problems. According to 1998 estimates, mental and neurological disorders accounted for 11.5 per cent of years lost to disability, 28 per cent of years lived with disability in nearly all regions of the world and 5 of the 10 leading causes of disability world-wide. In contrast, mental health problems accounted for 1.4 per cent of all deaths and 1.1 per cent of all years lost, highlighting the dangers of relying on mortality statistics to estimate the health status of populations. Furthermore the burden of mental health problems is not restricted to rich countries alone ; mental health problems were the most important contributor to Years lost to Disability (YLD) in all regions of the world except Sub-Saharan Africa. The burden of mental health problems is also disproportionately higher in adolescents and young adults. Amongst 15-44 year olds, mental and neurological disorders accounted for more than 30 per cent of all DALYs lost, twice the burden imposed by infectious diseases, five times the burden imposed by cardiovascular diseases and seven and half times the burden imposed by cancer. According to 2000 estimates, mental and neurological disorders accounted for 12.3 per cent of disability-adjusted life years, 31 per cent of years lived with disability and 6 of the 20 leading causes of disability worldwide.

It is estimated that the burden of mental disorders will grow in the coming decades. By 2020 they are likely to account for 15 per cent of DALYs lost with depression becoming the second most important cause of disability all over the world (Murray & Lopez, 1996). To compound an already bad situation, developing countries with poorly developed mental health care systems are likely to see the most substantial increases in the burden due to mental disorders.

The economic and social costs fall on individuals, their carers and families as well as societies and governments. Many mental disorders tend to be chronic or relapsing in character leading to prolonged or repeated episodes of care and treatment, thereby imposing substantial and ongoing treatment costs. In US, it is estimated that direct treatment costs attributable to depression are around US$12 billion. Comparative estimates of direct treatment costs from low-income countries are not easily available but are likely to be substantial. It is estimated that direct treatment costs of common mental disorders in Santiago, Chile (pop. 3.2 million), based on local prevalence and treatment costs would be nearly US$74 million and consume half of the mental health budget of the entire country.

Indirect economic costs arise chiefly out of lost employment and decreased productivity of those suffering from mental disorders as well as their carers and families. As opposed to other health conditions, mental disorders appear to have higher indirect costs compared to direct treatment costs.

For example, indirect costs due to absenteeism and lost productivity due to depression in the US is estimated at US$ 31 billion, nearly three times the direct treatment costs. In case of low-income countries where direct treatment costs tend to be low, indirect treatment costs are likely to account for an even larger proportion of total economic burden of mental disorders.

Families and carers usually end up bearing nearly all or majority of these economic costs, except in few well established market economies with comprehensive well funded public mental health care systems. Even when families do bear the economic burden, governments and societies ultimately pay a price in terms of reduced national income and increased expenditure on social welfare programmes.

Social costs include emotional burden and diminished quality of life for individuals and their family members, alienation and crime in young people whose childhood mental health problems are not sufficiently addressed for them to benefit fully from education and poor cognitive development in the children of parents with mental health problems.

In addition to the obvious suffering due to mental disorders, there exists a hidden burden of stigma and discrimination faced by those with mental disorders. In both low and relatively higher income countries, stigmatization of people with mental disorders has persisted through out history, manifested by bias, stereotyping, fear, embarrassment, anger and rejection or avoidance. Violations of basic human rights and freedoms and denial of civil, political and economic and social rights to those suffering from mental disorders is a common occurrence across the world, both within institutions and in the community. Physical, sexual and psychological abuse is an everyday experience for many with mental disorders. They face rejection, unfair denial of employment opportunities and discrimination in access to services, health insurance and housing policies. Much of this goes unreported and therefore this burden remains unquantified.

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