

## **DJP2B: ABNORMAL PSYCHOLOGY**

### **UNIT I: INTRODUCTION**

Meaning and Nature of Abnormal Behaviour – History of Psychopathology – Concept of normality and abnormality – Signs and symptoms of Mental Illness

### **UNIT II: MODELS, CLASSIFICATION, DIAGNOSIS & ASSESSMENT**

Psychodynamic, Behavioural, Cognitive and Existential models explaining abnormality – Brief history of classification – DSM V – Diagnostic tests, Rating scales, projective tests

### **UNIT III: ANXIETY & MOOD DISORDERS**

Anxiety Disorders: Phobia – Panic Disorder – Obsessive Compulsive Disorder – General Anxiety Disorder; Mood Disorders: Mania – Depression – Bipolar affective disorder – Dysthymia

### **UNIT IV: SOMATOFORM & DISSOCIATIVE DISORDERS**

Pain Disorder – Bodydysmorphic Disorder – Hypochondriasis - Conversion Disorder – Somatization Disorder - Biology of Somatoform Disorders

### **UNIT V: DISORDERS DUE TO PSYCHOLOGICAL SUBSTANCE USE**

Substance Abuse – Substance Dependence – Etiological Factors in the Development of Substance Dependence - Sociocultural Variables – Psychological Variables – Biological Variable – Alcoholism and Smoking

### **TEXT BOOKS:**

1. Davison, G.C., Neale, J.M and Kring,A..M. Abnormal Psychology.(9<sup>th</sup>ed). MA: John Wiley & Sons Inc., 2004.
2. Alloy, L.B; Riskind, J.H., & Manos, M.J. Abnormal Psychology. NewDelhi : Tata McGraw Hill pub, 2005.
3. Cutting,J. Principles of Psychopathology. NY: OUP,1997

### **REFERENCE BOOKS:**

1. Durand, M. V., & Barlow, D. H. (2016). Essentials of Abnormal Psychology. 7<sup>th</sup> ed. Cengage Learning, India.
2. Comer, R. J. (2014). Abnormal Psychology. 9<sup>th</sup> ed. Wadsworth Publishers.

# ABNORMAL PSYCHOLOGY

## **UNIT I: INTRODUCTION**

### Meaning and Nature of Abnormal Behaviour

Abnormal psychology is concerned with understanding the nature, causes, and treatment of mental disorders. The topics and problems within the field of abnormal psychology surround us every day. You have only to pick up a newspaper, flip through a magazine, surf the web, or sit through a movie to be exposed to some of the issues that clinicians and researchers deal with on a day-to-day basis.

Abnormal psychology can also be found much closer to home. The issues of abnormal psychology capture our interest, demand our attention, and trigger our concern. They also compel us to ask various questions about mental health and eventually about life and the society.

### Concept of normality and abnormality

The mental health community currently uses diagnostic procedures to decide on whether a given individual fits the criteria for abnormality. There are currently certain important criteria for abnormality.

1. *Suffering*: If people suffer or experience psychological pain we are inclined to consider this as indicative of abnormality. Depressed people clearly suffer, as do people with anxiety disorders. But what of the patient who is manic and whose mood is one of elation? He or she may not be suffering. In fact, many such patients dislike taking medications because they do not want to lose their manic “highs.” Although suffering is an element of abnormality in many cases, it is neither a sufficient condition (all that is needed) nor even a necessary condition (a feature that all cases of abnormality must show) for us to consider something as abnormal.

2. *Maladaptiveness*: Maladaptive behavior is often an indicator of abnormality. The person with anorexia may restrict her intake of food to the point where she becomes so emaciated that she needs to be hospitalized. The person with depression may withdraw from friends and family and may be unable to work for weeks or months. Maladaptive behavior interferes with our well-being and with our ability to enjoy our work and our relationships. However, not all disorders involve maladaptive behavior.

3. *Statistical Deviancy*: The word *abnormal* literally means “away from the normal.” But simply considering statistically rare behavior to be abnormal does not provide us with a solution to our problem of defining abnormality. Genius is statistically rare, as is perfect pitch. However, we do not consider people with such uncommon talents to be abnormal in any way. Also, just because something is statistically common doesn’t make it normal. The common cold is certainly very common, but it is regarded as an illness nonetheless. On the other hand, intellectual disability (which is statistically rare and represents a deviation from normal) is considered to reflect abnormality. This tells us that in defining abnormality we make value judgments. If something is statistically rare and undesirable (as is severely diminished intellectual functioning), we are more likely to consider it abnormal than something that is statistically rare and highly desirable (such as genius) or something that is undesirable but statistically common (such as rudeness).

4. *Violation of the Standards of Society*: All cultures have rules. Some of these are formalized as laws. Others form the norms and moral standards that we are taught to follow. Although many social rules are arbitrary to some extent, when people fail to follow the conventional social and moral rules of their cultural group we may consider their behavior abnormal. For example, driving a car or watching television would be considered highly abnormal. However, both of these activities reflect normal everyday behavior for most others. Of course, much depends on the magnitude of the violation and on how commonly the rule is violated by others. As illustrated in the example above, a behavior is most likely to be viewed as abnormal when it violates the standards of society and is statistically deviant or rare. In contrast, most of us have parked illegally at some point. This failure to follow the rules is so statistically common that we tend not to think of it as abnormal. Yet when a mother drowns her children there is instant recognition that this is abnormal behavior.

5. *Social Discomfort*: When someone violates a social rule, those around him or her may experience a sense of discomfort or unease. Imagine that you are sitting in an almost empty movie theater. There are rows and rows of unoccupied seats. Then someone comes in and sits down right next to you. How do you feel? In a similar vein, how do you feel when someone you met only 4 minutes ago begins to chat

about her suicide attempt? Unless you are a therapist working in a crisis intervention center, you would probably consider this an example of abnormal behavior.

6. *Irrationality and Unpredictability*: As we have already noted, we expect people to behave in certain ways. Although a little unconventionality may add some spice to life, there is a point at which we are likely to consider a given unorthodox behavior abnormal. If a person sitting next to you suddenly began to scream and yell obscenities at nothing, you would probably regard that behavior as abnormal. It would be unpredictable, and it would make no sense to you. The disordered speech and the disorganized behavior of patients with schizophrenia are often irrational. Such behaviors are also a hallmark of the manic phases of bipolar disorder. Perhaps the most important factor, however, is our evaluation of whether the person can control his or her behavior.

7. *Dangerousness*: It seems quite reasonable to think that someone who is a danger to him- or herself or to another person must be psychologically abnormal. Indeed, therapists are required to hospitalize suicidal clients or contact the police (as well as the person who is the target of the threat) if they have a client who makes an explicit threat to harm another person. But, as with all of the other elements of abnormality, if we rely only on dangerousness as our sole feature of abnormality, we will run into problems. Is a soldier in combat mentally ill? What about someone who is an extremely bad driver? Both of these people may be a danger to others. Yet we would not consider them to be mentally ill. Why not? And why is someone who engages in extreme sports or who has a dangerous hobby (such as free diving, race car driving, or keeping poisonous snakes as pets) not immediately regarded as mentally ill? Just because we may be a danger to ourselves or to others does not mean we are mentally ill. Conversely, we cannot assume that someone diagnosed with a mental disorder must be dangerous. Although mentally ill people do commit serious crimes, serious crimes are also committed every day by people who have no signs of mental disorder. One final point bears repeating. Decisions about abnormal behavior always involve social judgments and are based on the values and expectations of society at large. This means that culture plays a role in determining what is and is not abnormal. Because society is constantly shifting and becoming more or less tolerant of certain

behaviors, what is considered abnormal or deviant in one decade may not be considered abnormal or deviant a decade or two later.

### **The DSM-5 and the Definition of Mental Disorder**

According to the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, version 5, which was published in 2013, a mental disorder is defined as a syndrome that is present in an individual and that involves clinically significant disturbance in behavior, emotion regulation, or cognitive functioning. These disturbances are thought to reflect a dysfunction in biological, psychological, or developmental processes that are necessary for mental functioning. *DSM-5* also recognizes that mental disorders are usually associated with significant distress or disability in key areas of functioning such as social, occupational or other activities. Predictable or culturally approved responses to common stressors or losses (such as death of a loved one) are excluded. It is also important that this dysfunctional pattern of behavior not stem from social deviance or conflicts that the person has with society as a whole.

### **What Causes Abnormal Behavior?**

However defined, we can best conceptualize abnormal behavior from multiple perspectives that incorporate biological, psychological, and sociocultural factors.

#### **Biological Causes**

The biological domain includes genetic and environmental influences on physical functioning. People with psychological disorders may inherit a predisposition to developing behavioral disturbances. Of particular interest are inherited factors that alter the functioning of the nervous system. There are also physiological changes that affect behavior, which other conditions in the body cause, such as brain damage or exposure to harmful environmental stimuli. For example, a thyroid abnormality can cause a person's moods to fluctuate widely. Brain damage resulting from a head trauma can result in aberrant thought patterns. Toxic substances or allergens in the environment can also cause a person to experience disturbing emotional changes and behavior.

## **Psychological Causes**

Psychological causes of abnormal behavior involve disturbances in thoughts and feelings.

As you will learn in this book, there are a variety of alternative explanations of abnormal behavior that focus on factors such as past learning experiences, maladaptive thought patterns, and difficulties coping with stress. The varying theoretical perspectives within abnormal psychology reflect differences in assumptions about the underlying causes of human behavior. Treatment models based on these theoretical perspectives reflect these varying assumptions.

## **Sociocultural Causes**

The term *sociocultural* refers to the various circles of influence on the individual ranging from close friends and family to the institutions and policies of a country or the world as a whole. Discrimination, whether based on social class, income, race and ethnicity, or gender, can influence the development of abnormal behavior. For people who are diagnosed with a psychological disorder, social stigmas associated with being “mental patients” can further affect their symptoms. A **stigma** is a label that causes us to regard certain people as different, defective, and set apart from mainstream members of society. In addition to increasing the burden for them and for their loved ones, a stigma deters people from obtaining badly needed help, and thereby perpetuates a cycle in which many people in need become much worse. The stigma of psychological disorders affects people from ethnic and racial minorities more severely than those from mainstream society.

## **The Biopsychosocial Perspective**

Disturbances in any of these areas of human functioning can contribute to the development of a psychological disorder. However, we cannot so neatly divide the causes of abnormality. There is often considerable interaction among the three sets of influences. Social scientists use the term **biopsychosocial** to refer to the interaction in which biological, psychological, and sociocultural factors play a role in the development of an individual’s symptoms. The biopsychosocial perspective incorporates a developmental viewpoint. This means that individuals must be seen as changing over time. Biopsychosocial factors interact to alter the individual’s

expression of behavioral patterns over time. Thus, it is important to examine early risk factors that make an individual vulnerable to developing a disorder. Similarly, risk factors may vary according to the individual's position in the life span.

For some disorders, such as schizophrenia, biology plays a dominant role. For other disorders, such as stress reactions, psychological factors predominate. For other conditions, such as posttraumatic stress disorder, that result, for example, from experiences under a terrorist regime, the cause is primarily sociocultural.

However, certain life experiences can protect people from developing conditions to which they are vulnerable. Protective factors, such as loving caregivers, adequate health care, and early life successes, reduce vulnerability considerably. In contrast, low vulnerability can heighten when people receive inadequate health care, engage in risky behaviors (such as using drugs), and get involved in dysfunctional relationships. The bottom line is that we can best conceptualize abnormal behavior as a complex interaction among multiple factors.

### History of Psychopathology

The greatest thinkers of the world, from Plato to the present day, have attempted to explain the varieties of human behavior that constitute abnormality. Three prominent themes in explaining psychological disorders recur throughout history: the spiritual, the scientific, and the humanitarian. **Spiritual explanations** regard abnormal behavior as the product of possession by evil or demonic spirits. **Humanitarian explanations** view psychological disorders as the result of cruelty, stress, or poor living conditions. **Scientific explanations** look for causes that we can objectively measure, such as biological alterations, faulty learning processes, or emotional stressors.

### **Spiritual Approach**

The earliest approach to understanding abnormal behavior is spiritual; the belief that people showing signs of behavioral disturbance were possessed by evil spirits. Archeological evidence dating back to 8000 b.c. suggests that the spiritual explanation was prevalent in prehistoric times. Skulls of the living had holes cut out

of them, a process called “trephining,” apparently in an effort to release the evil spirits from the person’s head. Archeologists have found evidence of trephining from many countries and cultures, including the Far and Middle East, the Celtic tribes in Britain, ancient and recent China, India, and various peoples of North and South America, including the Mayans, Aztecs, Incas, and Brazilian Indians.

Another ancient practice was to drive away evil spirits through the ritual of exorcism, a physically and mentally painful form of torture carried out by a shaman, priest, or medicine man. Variants of shamanism have appeared throughout history. The Greeks sought advice from oracles who they believed were in contact with the gods. The Chinese practiced magic as a protection against demons. In India, shamanism flourished for centuries, and it still persists in Central Asia.

During the Middle Ages, people widely practiced magical rituals and exorcism, and administered folk medicines. Society considered people with psychological difficulties sinners, witches, or embodiments of the devil, and they were punished severely. *Malleus Malificarum*, an indictment of witches written by two Dominican monks in Germany in 1486, became the Church’s justification for denouncing witches as heretics and devils whom it had to destroy in the interest of preserving Christianity. The Church recommended “treatments” such as deportation, torture, and burning at the stake. Women were the main targets of persecution. Even in the late 1600s in colonial America, the Puritans sentenced people to burning at the stake, as evidenced by the famous Salem Witchcraft trials.

### **Humanitarian Approach**

The humanitarian approach developed throughout history, in part as a reaction against the spiritual approach and its associated punishment of people with psychological disorders. Poorhouses and monasteries became shelters, and although they could not offer treatment, they provided some protective measures. Unfortunately, these often became overcrowded, and rather than provide protection themselves, they became places where abuses occurred. For example, society widely believed that psychologically disturbed people were insensitive to extremes of heat and cold, or to the cleanliness of their surroundings. Their “treatment” involved bleeding, forced

vomiting, and purging. It took a few courageous people, who recognized the inhumanity of the existing practices, to bring about sweeping reforms. By the end of the eighteenth century, hospitals in France, Scotland, and England attempted to reverse these harsh practices. The idea of “moral treatment” took hold—the notion that people could develop self-control over their behaviors if they had a quiet and restful environment. Institutions used restraints only if absolutely necessary, and even in those cases the patient’s comfort came first.

Conditions in asylums again began to worsen in the early 1800s as facilities suffered from overcrowding and staff resorted to physical punishment to control the patients. In 1841, a Boston schoolteacher named Dorothea Dix (1802–1887) took up the cause of reform. Horrified by the inhumane conditions in the asylums, Dix appealed to the Massachusetts Legislature for more state funded public hospitals to provide humane treatment for mental patients. From Massachusetts, Dix spread her message throughout North America and Europe.

Over the next 100 years, governments built scores of state hospitals throughout the United States. Once again, however, it was only a matter of time before the hospitals became overcrowded and understaffed. It simply was not possible to cure people by providing them with the well-intentioned, but ineffective, interventions proposed by moral treatment. However, the humanitarian goals that Dix advocated had a lasting influence on the mental health system. Her work was carried forward into the twentieth century by advocates of what became known as the mental hygiene movement.

Until the 1970s, despite the growing body of knowledge about the causes of abnormal behavior, the actual practices in the day-to-day care of psychologically disturbed people were sometimes as barbaric as those in the Middle Ages. Even people suffering from the least severe psychological disorders were often housed in the “backwards” of large and impersonal state institutions, without adequate or appropriate care. Institutions restrained patients with powerful tranquilizing drugs and straitjackets, coats with sleeves long enough to wrap around the patient’s torso. Even more radical was the indiscriminate use of behavior-altering brain surgery or the

application of electrical shocks—so-called treatments that were punishments intended to control unruly patients.

Public outrage over these abuses in mental hospitals finally led to a more widespread realization that mental health services required dramatic changes. The federal government took emphatic action in 1963 with the passage of groundbreaking legislation. The Mental Retardation Facilities and Community Mental Health Center Construction Act of that year initiated a series of changes that would affect mental health services for decades to come. Legislators began to promote policies designed to move people out of institutions and into less restrictive programs in the community, such as vocational rehabilitation facilities, day hospitals, and psychiatric clinics. After their discharge from the hospital, people entered halfway houses, which provided a supportive environment in which they could learn the necessary social skills to re-enter the community. By the mid-1970s, the state mental hospitals, once overflowing with patients, were practically deserted. These hospitals freed hundreds of thousands of institutionally confined people to begin living with greater dignity and autonomy. This process, known as the deinstitutionalization movement, promoted the release of psychiatric patients into community treatment sites.

Unfortunately, the deinstitutionalization movement did not completely fulfill the dreams of its originators. Rather than abolishing inhumane treatment, deinstitutionalization created another set of woes. Many of the promises and programs hailed as alternatives to institutionalization ultimately failed to come through because of inadequate planning and insufficient funds. Patients shuttled back and forth between hospitals, halfway houses, and shabby boarding homes, never having a sense of stability or respect. Although the intention of releasing patients from psychiatric hospitals was to free people who had been deprived of basic human rights, the result may not have been as liberating as many had hoped. In contemporary American society, people who would have been in psychiatric hospitals four decades ago are moving through a circuit of shelters, rehabilitation programs, jails, and prisons, with a disturbing number of these individuals spending long periods of time as homeless and marginalized members of society.

Contemporary advocates of the humanitarian approach suggest new forms of compassionate treatment for people who suffer from psychological disorders. These advocates encourage mental health consumers to take an active role in choosing their treatment. Various advocacy groups have worked tirelessly to change the way the public views mentally ill people and how society deals with them in all settings.

### *Scientific Approach*

Early Greek philosophers were the first to attempt a scientific approach to understanding psychological disorders. Hippocrates (ca. 460–377 b.c.), considered the founder of modern medicine, believed that there were four important bodily fluids that influenced physical and mental health, leading to four personality dispositions. To treat a psychological disorder would require ridding the body of the excess fluid. Several hundred years later, the Roman physician Claudius Galen (a.d. 130–200) developed a system of medical knowledge based on anatomical studies.

Scientists made very few significant advances in the understanding of abnormality until the eighteenth century. Benjamin Rush (1745–1813), the founder of American psychiatry, rekindled interest in the scientific approach to psychological disorders. In 1783, Rush joined the medical staff of Pennsylvania Hospital. Appalled by the poor hospital conditions, he advocated for improvements such as placing psychologically disturbed patients in their own wards, giving them occupational therapy, and prohibiting visits from curiosity seekers who would visit the hospital for entertainment. Reflecting the prevailing methods of the times, Rush also supported the use of bloodletting and purging in the treatment of psychological disorders as well as the “tranquilizer” chair, intended to reduce blood flow to the brain by binding the patient’s head and limbs. Rush also recommended submerging patients in cold shower baths and frightening them with death threats. He thought that fright inducement would counteract the overexcitement that he believed was responsible for the patients’ violent behavior (Deutsch, 1949). In 1844, a group of 13 mental hospital administrators formed the Association of Medical Superintendents of American Institutions for the Insane. The organization eventually changed its name to the American Psychiatric Association. German psychiatrist Wilhelm Greisinger published *The Pathology and Therapy of Mental Disorders* in 1845, which proposed

that “neuropathologies” were the cause of psychological disorders. Another German psychiatrist, Emil Kraepelin, promoted a classification system much like that applied to medical diagnoses. He proposed that disorders could be identified by their patterns of symptoms. Ultimately, this work provided the scientific basis for current diagnostic systems.

The scientific approach to psychological disorders also gained momentum as psychiatrists and psychologists proposed behavior models that included explanations of abnormality. In the early 1800s, European physicians experimented with hypnosis for therapeutic purposes. Eventually, these efforts led to the groundbreaking work of Viennese neurologist Sigmund Freud (1856–1939), who in the early 1900s developed psychoanalysis, a theory and system of practice that relied heavily on the concepts of the unconscious mind, inhibited sexual impulses, and early development.

Throughout the twentieth century, psychologists developed models of normal behavior, which eventually became incorporated into systems of therapy. The work of Russian physiologist Ivan Pavlov (1849–1936), known for his discovery of classical conditioning, became the basis for the behaviorist movement begun in the United States by John B. Watson (1878–1958). B. F. Skinner (1904–1990) formulated a systematic approach to operant conditioning, specifying the types and nature of reinforcement as a way to modify behavior. In the twentieth century, these models continued to evolve into the social learning theory of Albert Bandura (1925–), the cognitive model of Aaron Beck (1921–), and the rational-emotive therapy approach of Albert Ellis (1913–2007).

In the 1950s, scientists experimenting with pharmacological treatments invented medications that for the first time in history could successfully control the symptoms of psychological disorders. Now, patients could receive treatments that would allow them to live for extended periods of time on their own outside psychiatric hospitals.

Most recently, the field of abnormal psychology is benefiting from the **positive psychology** movement, which emphasizes the potential for growth and change throughout life. The movement views psychological disorders as difficulties that inhibit the individual’s ability to achieve highly subjective well-being and feelings of fulfillment. In addition, the positive psychology movement emphasizes prevention

rather than intervention. Instead of fixing problems after they occur, it would benefit people more if they could avoid developing symptoms in the first place. Although its goals are similar to those of the humanitarian approach, the positive psychology movement has a strong base in empirical research and as a result is gaining wide support in the field.

## UNIT II: MODELS, CLASSIFICATION, DIAGNOSIS & ASSESSMENT

### *Why Do We Need to Classify Mental Disorders?*

If defining abnormality is so contentious and so difficult, why do we try to do it? One simple reason is that most sciences rely on classification (e.g., the periodic table in chemistry and the classification of living organisms into kingdoms, phyla, classes, and so on in biology). At the most fundamental level, classification systems provide us with a nomenclature (a naming system) and enable us to *structure information* in a more helpful manner.

Simply put, defining the domain of what is considered to be pathological establishes the range of problems that the mental health profession can address. As a consequence, on a purely pragmatic level, it furthermore delineates which types of psychological difficulties warrant insurance reimbursement and the extent of such reimbursement. Organizing information within a classification system also allows us to study the different disorders that we classify and therefore to learn more about not only what causes them but also how they might best be treated.

### DSM V

The *Diagnostic and Statistical Manual of Mental Disorders (DSM)* provides all the information necessary (descriptions, lists of symptoms) to diagnose mental disorders. As such, it provides clinicians with specific diagnostic criteria for each disorder. This creates a common language so that a specific diagnosis means the same thing to one clinician as it does to another. This also helps ensure diagnostic accuracy and consistency (reliability). *DSM* is also important for research. If patients could not be diagnosed reliably it would be impossible to compare different treatments for patients with similar conditions. Although the *DSM* does not include information about treatment, clinicians need to have an accurate diagnosis in order to select the most appropriate treatment for their patients.

The DSM-I, the first edition published in 1952, followed a theoretical approach where mental disorders were seen as an individual's *'emotional reactions'* to his problems.

The DSM-II which was published in 1968, tried to introduce explicit definitions and diagnostic terms that would reduce reliance on theoretical assumptions.

In 1974, the APA appointed a team of scholars and practitioners to develop a manual that would be based on observable phenomena and acceptable to clinicians irrespective of their theoretical orientation. This led to the DSM-III, published in 1980.

Although the DSM-III was a refined edition, it had instances in which the diagnostic criteria were not entirely clear. Due to this, the DSM-III-R was published in 1987 as an interim manual till a more complete edition was developed.

Around the same time, the APA once again set up a task force that worked towards improving the reliability and validity of the diagnoses, in stages. In stage 1, its members reviewed the relevant research published which was then carefully analysed in stage 2. The next stage involved field trials in which several thousand individuals with diagnosed psychological disorders were interviewed. Consistency in diagnosis was assessed by having pairs of clinicians independently rate clients through videotaped interviews. To establish the validity of the diagnosis, clinicians evaluated individuals diagnosed with specific psychological disorders, with the number and nature of symptoms needed to diagnose specific conditions. These field trials helped to empirically decide the specific kind and number of symptoms that would make a diagnostic criteria. For example, to diagnose Major Depressive Disorder, a person has to have at least five out of the nine listed symptoms which include lack of interest, sad mood, disturbed sleep, disturbed appetite, feelings of worthlessness, etc.

Thus, the DSM-IV was published in 1994. A major feature of this version was that it included ‘the symptoms cause clinically significant distress or impairment in social, occupational or other areas of functioning’ as one criterion for almost half of all the disorders. The DSM-IV with updated information, known as DSM-IV-TR (text revised) was published by 2013.

The DSM is based on some assumptions:

- 1) **Medical Model:** The DSM follows a medical model which means that every physical and psychological disorder is regarded as a disease. In this sense the DSM is similar to the ICD, the International Classification of Diseases (ICD), developed by the World Health Organisation, and ensures uniformity in the usage

of medical terms. Thus, according to this view, Schizophrenia is a *disease* and the individual suffering from it is referred to as *patient*. The use of the term *mental disorder* is also in line with this view. Although the term mental disorder implies a distinction between *mental* disorders and *physical* disorders, it is important to recognise that there aren't any fundamental differences between mental disorders and general medical conditions. Mental disorders tend to involve biological factors and similarly physical disorders have psychological components.

The term '*general medical conditions*' (Axis III) is used only as a convenient format to refer to illnesses that are not listed under mental disorders.

- 2) **Atheoretical Orientation:** The authors of the DSM have tried to develop a descriptive rather than explanatory classification system, that is, a psychological disorder is presented as an observable phenomenon rather than in terms of what caused it.

The DSM is neutral with respect to the theories of causality. For example, the DSM-IV-TR classifies social phobia as an anxiety disorder in which the person has persistent fear of social or performance situations, without any reference to whether the anxiety is caused due to a childhood trauma or an unconscious conflict or any other factor.

The early editions of the DSM were based on the psychoanalytical tradition in which mental disorders were seen as *neurosis* or an *emotional reaction* to one's problems and were thought to be a result of unconscious conflicts. The term neurosis is not a part of the DSM anymore but is still commonly used to describe symptoms that are distressing and do not have a physiological basis. The term is also used to refer to excessive anxiety or worry and to distinguish the condition from psychosis.

Psychosis involves the presence of hallucinations (false perceptions) and delusions (false beliefs). It is a condition in which the person is not in touch with reality and shows grossly disturbed and bizarre behaviour. Psychosis is not a diagnostic category but used as a descriptive term in the DSM-IV-TR.

3) **Categorical Approach:** The DSM-IV-TR classifies the disorders into separate categories. For instance, conditions which involve excessive anxiety or worry are categorised as anxiety disorders, those which affect the mood are referred to as mood disorders. Although systematic, this approach has a limitation - psychological disorders cannot be very neatly separated from one another. For example, it is difficult to distinguish between sad mood and clinical depression (severe enough to receive a diagnosis of depression). Also, some cases involve a mixed presentation such a person experiencing anxiety and sad mood or mood symptoms with psychosis.

Due to this, a dimensional approach is being considered, that is, instead of fitting an individual's symptoms into some category s/he would receive a numerical rating on his symptoms indicating the severity of each. The dimensional model is thought to give a better picture of the individual's condition.

There are two issues related to the categorical approach. One is comorbidity, that is, conditions in which a person has two or more disorders that co-exist. For instance, negative emotional states are common in anxiety disorders, mood disorders and some personality disorders. The second is that of boundaries - some disorders have overlapping symptoms, such as conduct disorder, oppositional defiant disorder and attention-deficit/hyperactivity disorder (Widiger & Samuel, 2005).

4) **Multiaxial system:** This system involves assessing five areas of an individual's functioning so that the treatment can be planned accordingly and the course of the disorder can be predicted. The DSM comprises of five axes:

### **Axis I: Clinical Disorders and Other Conditions That May Be a Focus of Clinical Attention**

This axis is used for listing the various forms of abnormality, that is, the clinical syndromes or disorders with the exception of the Personality Disorders and Mental Retardation, such as schizophrenia, the different types of anxiety disorders, such as

social phobia, specific phobia, generalised anxiety disorder, obsessive compulsive disorder, etc., mood disorders such as major depressive disorder, bipolar disorder, etc., adjustment disorders, cognitive disorders like delirium, dementia, amnesic disorder, etc. If an individual has more than one Axis I disorder, all should be reported with the primary reason for the visit being listed first.

### **Axis II: Personality Disorders and Mental Retardation**

All the Personality Disorders like Paranoid personality disorder, Schizoid personality disorder, Schizotypal personality disorder, Antisocial personality disorder, Narcissistic personality disorder, etc., and Mental Retardation are reported on Axis II. Maladaptive personality features or excessive use of defense mechanisms can also be mentioned here. This axis ensures that the unhealthy personality characteristics and mental retardation will be taken into account while attending to the primary complaint.

### **Axis III: General Medical Conditions**

This axis is for reporting the general medical conditions that are important in understanding an individual's mental disorder. General medical conditions may be related to the mental disorders in several ways. In some cases they may play a role in the development of an Axis I disorder, for example, Hypothyroidism may lead to depressive symptoms in some or an individual may develop an Adjustment disorder as a reaction to the diagnosis of Brain tumour. In certain cases medical conditions may influence the treatment of the Axis I disorder, for instance, a person's heart disease may influence the clinician's choice of medicines for this patient's depression.

### **Axis IV: Psychosocial and Environmental Problems**

The psychosocial and environmental problems that influence the diagnosis, treatment and prognosis (future course) of mental disorders listed on Axis I and/or II are reported on this axis. This includes a negative life event, interpersonal stresses, lack

of social support, etc. These problems may influence the development or treatment of mental disorders or may develop as a result of the Axis I/II condition.

### **Axis V: Global Assessment of Functioning**

This axis is for reporting the clinician's judgement of the individual's overall functioning, which is useful in treatment planning or predicting its outcome. The Global Assessment of Functioning (GAF) scale is used to rate the individual's psychological, social and occupational functioning

Since *DSM-I* was first published in 1952, the *DSM* has been revised from time to time. Revisions are important because they allow new scientific developments to be incorporated into how we think about mental disorders. The revision process for *DSM-5* had the goals of maintaining continuity with the previous edition (*DSM-IV*) as well as being guided by new research findings.

But another guiding principle was that no constraints should be placed on the level of change that could be made. If this strikes you as a little contradictory, you are correct. Striking the right balance between change and continuity presented considerable challenges. It also created a great deal of controversy. As part of the revision process, experts in specific disorders were invited to join special *DSM-5* work groups and make specific recommendations for change. In some cases, the debates were so heated that people resigned from their work groups! Now that *DSM-5* is here, not everyone is happy with some of the changes that have been made. On the other hand, many of the revisions that have been made make a lot of sense.

### ***The Disadvantages of Classification***

Of course, there are a number of disadvantages in the usage of a discrete classification system. Classification, by its very nature, provides information in a shorthand form. However, using any form of shorthand inevitably leads to a *loss of information*. If we know the specific history, personality traits, idiosyncrasies, and familial relations of a person with a particular type of disorder (e.g., from reading a case summary), we naturally have much more information than if we were simply told the individual's diagnosis (e.g., schizophrenia). In other words, as we simplify

through classification, we inevitably lose an array of personal details about the actual person who has the disorder.

Moreover, although things are improving, there can still be some stigma (or disgrace) associated with having a psychiatric diagnosis. Even today, people are generally far more comfortable disclosing that they have a physical illness such as diabetes than they are in admitting to any mental disorder. This is in part due to the fear (real or imagined) that speaking candidly about having a psychological disorder will result in unwanted social or occupational consequences or frank discrimination. Be honest. Have you ever described someone as “nuts,” “crazy,” or “a psycho”? Now think of the hurt that people with mental disorders experience when they hear such words. In spite of the large amount of information that is now available about mental health issues, the level of knowledge about mental illness (sometimes referred to as mental health literacy) is often very poor (Thornicroft et al., 2007).

Related to stigma is the problem of stereotyping. Stereotypes are automatic beliefs concerning other people that are based on minimal (often trivial) information (e.g., people who wear glasses are more intelligent). Because we may have heard about certain behaviors that can accompany mental disorders, we may automatically and incorrectly infer that these behaviors will also be present in any person we meet who has a psychiatric diagnosis.

Take a moment to consider honestly your own attitudes toward people with mental disorders. What assumptions do you tend to make? Do you view people with mental illness as less competent, more irresponsible, more dangerous, and more unpredictable? Research has shown that such attitudes are not uncommon. Can you recall movies, novels, or advertisements that maintain such stereotypes? What are some ways in which you can challenge the false assumptions that are so common in the media?

Finally, stigma can be perpetuated by the problem of *labeling*. A person's self-concept may be directly affected by being given a diagnosis of schizophrenia, depression, or some other form of mental illness. How might you react if you were told something like this? Furthermore, once a group of symptoms is given a name and

identified by means of a diagnosis, this diagnostic label can be hard to shake even if the person later makes a full recovery.

It is important to keep in mind, however, that diagnostic classification systems do not classify people. Rather, *they classify the disorders that people have*. When we note that someone has an illness, we should take care not to define him or her by that illness. Respectful and appropriate language should instead be used. At one time, it was quite common for mental health professionals to describe a given patient as “a schizophrenic” or “a manic-depressive.” Now, however, it is widely acknowledged that it is more accurate (not to mention more considerate) to say, “a person with schizophrenia,” or “a person with manic depression.” Simply put, the person is not the diagnosis.

### ***How Can We Reduce Prejudicial Attitudes Toward the Mentally Ill?***

For a long time, it was thought that educating people that mental illnesses were “real” brain disorders might be the solution. Sadly, however, this does not seem to be the case. Although there have been impressive increases in the proportion of people who now understand that mental disorders have neurobiological causes, this increased awareness has not resulted in decreases in stigma.

### **Assessment of Abnormality**

Psychological assessment refers to gathering and integration of psychological data for the purpose of a psychological evaluation through the use of tests, interview, observation, etc.

This kind of an assessment is carried out in order to arrive at a diagnosis for an individual with a mental disorder, to determine the individual’s intellectual capacity, to predict how suitable a person is for a job and to assess if a person is competent to stand trial.

There are various techniques used in assessment of which we will discuss two - the clinical interview and the mental status examination.

### **Clinical Interview:**

This is the most common method used to understand the client, his presenting problem, history and future goals. The interview involves asking questions in a face-to-face interaction. The clinician may audiotape or videotape the details or note them down during or after the interview. There are two kinds of clinical interviews:

#### **a) Unstructured Interview:**

In this type of an interview, the client is asked open-ended questions related to his or her presenting problem, the family background and life history.

The term ‘unstructured’ is used to indicate that the interviewer is free to ask questions in any order and frames them in a manner that he prefers. The client’s response to the previous question and nonverbal cues such eye-contact, posture, tone of voice, etc., guide the interviewer in this process.

The interviewer’s approach is influenced by the purpose of the interview. A clinician who wants to arrive at a diagnosis would ask questions related to the client’s symptoms, such as changes in mood, sleep pattern, disturbance in appetite, nature of thoughts, etc., their onset, duration and progress, medical or psychiatric history if any. Some clients seek help for personal issues such as disturbed relationships and may not have a diagnosable psychological disorder. In such cases the interviewer would try to enquire about the reasons for the client’s distress.

A significant part of an unstructured interview is history taking, which involves asking questions related to personal history such as major life events since childhood, academic interest and performance, number of friends and leisure activities, work life, marriage, habits, etc., and family history such as numbers of family members, close relatives and relationships with them, atmosphere at home, history of illnesses in the family, etc.

This gives the clinician a picture of the client’s world and may also help draw connections between the client’s current problem and a traumatic event in early life.

### **Structured and Semistructured Interviews:**

The structured interview gives less freedom to the clinician as it involves asking a set of predetermined questions in a fixed order. The semistructured interview also has a

standardised set of questions but the interviewer can ask follow up questions to clarify the client's responses, if needed.

The advantage of structured and semistructured interviews is that they help make accurate diagnosis. Some of these are designed to cover a wide range of psychological disorders while others are meant to diagnose specific conditions such as a Schizophrenia or Mood or Anxiety disorder.

The Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV) is a commonly used structured interview while the Structured Clinical Interview for DSM-IV-TR Axis I disorders (SCID-I) and the Structured Clinical Interview for DSM-IV Personality disorders (SCID-II) are examples of semistructured interviews (despite the word structured).

### **Mental Status Examination:**

The mental status means what the client thinks, feels and how the client thinks, speaks and behaves. The mental status examination or the MSE is used to assess the client's thoughts, feelings and behaviour and identify symptoms. An example of a structured MSE is the mini-mental status examination (MMSE) which is very useful in assessing patients with cognitive disorders such as Alzheimer's disease. The MSE report is based on the client's responses and the clinician's objective observations of the client's appearance, speech and behaviour. Following are the components of the MSE:

- a) **Appearance and Behaviour:** The clinician carefully looks for any peculiarities in the client's appearance and overall behaviour as this can give an insight into her/her mental state.

Clinician's are interested in the client's motor behaviour, that is, the movements. Anxious patients tend to fidget or pace around while some others tend to move about in a sluggish manner. Overactivity can be seen in the form of **hyperactivity** which refers to increased physical activity and quick movements or **psychomotor agitation** which is characterised by agitation and excessive motor and cognitive activity. Some

patients show **psychomotor retardation**, that is, visible slowing of thoughts, speech and movements. Strange mannerisms, stereotyped movements and vocal or motor tics (involuntary muscular movements) are seen in some others.

In extreme cases, motor abnormalities may manifest as **catatonia** which is seen in psychotic patients. Some of these patients constantly maintain an immobile position (catalepsy) or assume bizarre postures or can be moulded into a position that is then maintained (waxy flexibility).

**Compulsion** is a form of motor disturbance in which there is an uncontrollable impulse to perform an act repeatedly. For example, counting the fingers or scratching one's nose before answering every question, chanting a particular mantra every few minutes, etc.

- b) **Orientation**: This refers to one's awareness of time, place and person. In some disorders the patient's sense of themselves and the surrounding is disturbed. This is important in diagnosing cognitive disorders such as Delirium, Dementia, Amnesia and also psychotic disorders like Schizophrenia.
- c) **Content of Thought**: Disturbances in the thought process occurs in various forms. Some patients have an **obsession**, which means an intrusive, repetitive, thought, image or impulse which causes distress. For example, thoughts of being unclean or contaminated, that is often accompanied by the compulsion of washing hands.

Another form of disturbance in thought content is **delusions**. These are unshakable, false beliefs which cannot be corrected through logical reasoning, for example, a man may believe that he is a messenger of God who has been sent on Earth for a special mission. Delusions can be of different types:

**Grandeur:** A person's exaggerated conception of one's importance, power, beauty or identity.

**Control:** False feeling that a person's will, thoughts or feelings are being controlled by external forces. One form of this delusion is *thought broadcasting* in which the person believes that his/her thoughts can be heard by others as if they were being broadcast over the air. Likewise, *thought insertion* is a delusional belief that others are implanting thoughts in a person's mind.

**Reference:** False belief that other's actions refer to oneself or that others are talking about him/her.

**Persecution:** False belief that the person him/herself or a loved one is being harassed, cheated or mistreated by someone.

**Self-blame:** False feeling of regret or guilt in which the person holds him/herself responsible for some wrongdoing.

**Somatic:** False belief involving body functions such the belief that the brain is rotting or melting.

**Infidelity:** False belief associated with pathological jealousy about a person's lover being unfaithful.

There are **overvalued ideas** which refer to unusual thoughts of a bizarre nature but they are not as rigid as delusions. For example, a man who believes that his credit card number should end with the digit 6 and refuses to accept a new credit card with a different last number. **Magical thinking** involves seeing a connection between two events which would seem unrelated to most people. For example, a woman may believe that every time she buys things from a particular shop her husband loses a contract.

Overvalued ideas and magical thinking do not indicate that the person has a mental disorder but suggests some psychological decline. Violent thoughts such suicidal ideas or thoughts of harming or killing another person also need to be assessed.

d) **Thinking Style and Language:** An individual's style of thinking is manifested through his or her speech. For example, speaking to person with Schizophrenia or

other forms of psychosis can be difficult because their language may be illogical.

Examples of thought disorder:

**Incoherence:** The speech is not clear and understandable.

For example, —the ice-cream threw the poodle that is not here.‡

**Loosening of associations:** Ideas expressed are unrelated.

For example, —Suma is nice person but there is lot of poverty in the world and I am going to cut my hair tomorrow.‡

**Illogical thinking:** Thoughts that has wrong conclusions. For example, a person who likes milk thinks she must be a cat.

**Neologisms:** New words created, often by combining syllables of other words. For example, —I saw some —snarks‡ today that were —boredomly bad.‡

**Blocking:** Sudden interruption in the train of thought before the idea is finished.

**Circumstantiality:** Indirect speech that is delayed in reaching the point by bringing in lot of irrelevant details.

**Tangentiality:** Going off on a different point without coming to the original idea.

**Clanging:** Association of words similar in sound but not in meaning. For example, —That is Ross, there is so much moss, the coin will toss.‡

**Confabulation:** Making up ideas to fill in gaps in memory. This is not an attempt to lie but to give the most possible answer. For example, when one is not very sure if he has had breakfast and is asked what he had eaten, he may give an elaborate account of a typical breakfast.

**Echolalia:** Pathological repeating of words or phrases of one person by another.

**Flight of ideas:** Rapid, continuous shifting from one idea to another in which ideas tend to be connected.

**Pressure of speech:** Rapid speech as if the person feels forced to speak continuously.

**Perseveration:** Continuing with a response to a previous question or stimulus after a new question or stimulus is presented.

- e) **Affect and Mood:** Emotion is a complex feeling state with somatic, cognitive and behavioural components. **Affect** refers to an observed expression of emotion. While assessing the affect, the clinician checks if it is **appropriate** (condition in which emotional tone is in harmony with the accompanying idea) or **inappropriate**

(disharmony between the feeling tone and the thought or idea accompanying it).

The **intensity of affect**, that is, its strength is also noted. The affect is described as **blunted affect** when there is a severe reduction in the intensity of externalised feeling tone and as **flat affect** when signs of affective expression are absent or nearly absent, the face is immobile and voice is monotonous. On the other hand, **exaggerated** or **heightened** or **overdramatic affect** is reported when the emotional expression is very strong. The range of affect in terms of the variety of emotional expressions noted is also taken into account.

**Mood** is a pervasive and sustained state of emotion that one feels inside. Mood may be described as **dysphoric** (unpleasant feelings such as sadness or irritability), **euphoric** (very cheerful with feelings of grandeur), **euthymic** (normal range of mood; absence of depressed or elevated mood), angry, anxious, etc.

- f) **Perceptual Experiences**: Some psychological disorders are characterised by disturbances in perception. The clinician enquires about these by asking whether the patient hears voices or sees things that others are unaware of. Hallucinations are false sensory perceptions in the absence of real external stimuli. These are different from illusions in which there is distortion of a real stimulus such as misperceiving a rope as a snake. Hallucinations can involve any of the five senses:

**Auditory hallucinations** are the most common and involve hearing sounds or voices (usually insulting comments such as —you are dumb!) or conversations.

**Command hallucinations** are those in which one hears instruction to act in a certain way.

**Visual hallucinations** involve seeing images of objects or persons. For example, a person may claim to see God or one's spouse who has passed away.

**Olfactory hallucinations** are uncommon and refer to false perception of smells such as unpleasant odours.

**Gustatory hallucinations** are false perceptions of taste usually unpleasant in nature.

**Somatic hallucinations** involve false sensations pertaining to the body, usually tactile such as crawling sensation on or under the skin.

- g) **Sense of Self**: Some psychological disorders affect the person's identity or the sense of 'who am I.' **Depersonalisation** is a phenomenon in which the person feels he is unreal, strange or unfamiliar with himself. For example, one may feel that his mind and body are not connected. One may also experience **identity confusion** which involve a lack of clear sense of who one is, what one's role is, etc.
- h) **Motivation**: In some psychological disorders, the patients lose interest in all activities to the extent that even ordinary tasks such as having a bath or dressing may seem difficult. Some may not be willing to put in any effort to change and might find their familiar state of distress better than the uncertainty of facing new challenges.
- i) **Cognitive Functioning**: During the MSE, the clinician attempts to judge the client's general intellectual capacity from the answers given by the client, on questions related to attention and concentration, memory, ability to think in an abstract manner, etc. For instance, in case a client's memory is severely impaired, the clinician might suspect a neurological condition such Alzheimer's disease. Here, the clinician doesn't administer an IQ test but rather gets a general idea about the client's cognitive abilities.
- j) **Insight and Judgement**: The clinician is also interested in seeing whether the client understands one's own difficulties. Insight refers to a person's ability to understand the true cause and meaning of a situation. For example, a person who has paranoid delusions may be very defensive and unable to see things objectively, showing poor insight.

Judgment is the ability to assess a situation correctly and to act appropriately in the situation. Clients who are severely impaired may not be in a position to make correct decisions and this may result in harm to self or others. Thus, checking the client's judgment gives the clinician an idea of protective measures that may have to be initiated.

## **BEHAVIOURAL ASSESSMENT:**

Behavioural assessment involves systematic recording of an individual's behaviour in order to identify problem behaviours, the factors that help maintain these behaviours and decide techniques to modify the undesirable behaviours. Clinicians use various methods such as behavioral interviews, observational methods - naturalistic observation/ controlled observation, self-monitoring, role-playing, inventories, checklists, etc., of which behavioural self-report and observation are most common.

### **Behavioural Self-Report:**

This is a method in which the client provides information about how frequently certain behaviours occur, either through an interview or by monitoring oneself and filling up checklists or inventories developed for this purpose.

The advantage of self-report is that it helps obtain critical information about the client's behaviours which others would not have access to.

Behavioural interviews involve a detailed enquiry into what happens before, during and after the behaviour in question. In understanding the before' factors, the clinician may ask questions such as when and where does the behaviour occur, does the behaviour occur in presence of any particular person or stimulus, etc.

Particulars of the 'during' phase may be found out with the help of questions such as how many times and for how long does the problem behaviour occur, what happens first, what follows that, etc.

The client is also asked about the consequence of the behaviour in terms of what effect does it have or how does it benefit him or her. For example, in case of a client who wants to give up smoking, the clinician may be interested in knowing how frequently the person smokes in a day, any specific time and place at which he smokes, does he smoke in the company of certain people, what triggers the smoking behaviour, what the client thinks and feels after smoking, etc.

Thus, the extensive information obtained helps set realistic goals and devise strategies to change the undesirable behaviour.

Another behavioural self report technique is self monitoring, which involves keeping a record of the frequency of the problem behaviour such as, number of cigarettes or

calories consumed, number of times the client bit her nails or had unwanted thoughts or got angry.

The client is trained to note the time, place and relevant information pertaining to the target behaviour. Self-monitoring is a very useful technique because it may lead to important insights, for example, a woman may realise that she tends to eat more while watching the television or when she is distracted.

Behavioural checklists or inventories help to find whether certain events or experiences have occurred. For example, the Conners Ratings Scales-Revised uses self and observer ratings to assess attention deficit hyperactivity disorder and determine the number and nature of undesirable behaviours present. Checklists and inventories are quite commonly used in the clinical set up because they are easy to use and economical.

### **Behavioural Observation:**

In this method, the clinician observes and records the frequency of the behaviour in question, including any other relevant situational variables. For example, a nurse may be asked to observe the number of times a patient washes her hands and also her reactions when she is prevented from doing that. Or a trained observer may record the number of times a child leaves his place or speaks out of turn.

In observing the clients, the clinician first selects the problem behaviour on the basis of an interview, direct observation or using behavioural checklists or inventories. The problem behaviour is then broken down into behavioural terms, that is, it is defined. For example, temper tantrum would be defined in terms of crying and shouting.

Selecting vague target behaviours is inappropriate in behavioural observation because it makes measurement difficult. For example, violent behaviour cannot be measured unless specified as breaking things around or whichever is the behaviour exhibited.

It is best to observe the target behaviour in the natural setting and this kind of behavioural observation is known as in vivo observation. In assessing a child with attention deficit hyperactivity disorder, a clinician is likely to get an accurate picture of the child's problem behaviours if he is observed in the classroom or at home rather than in the lab or clinic.

While using this method the clinician has to be careful about the client's reactivity - the knowledge of being observed can influence the target behaviours. In order to avoid these problems, the client may be observed through a one-way mirror. In some situations, others may be included and the client's interaction with them may be observed with focus on the target behaviours.

### **MULTICULTURAL ASSESSMENT:**

In the process of assessment, the clinician needs to be sensitive to the cultural, racial and ethnic background of the client. There is a growing emphasis on developing culture fair tests and being careful while administering and interpreting psychological tests as the background from which the client comes can seriously influence the test performance. For example, while assessing a client whose mother-tongue is not English, the clinician needs to ensure that the instructions are followed and that the client's scores are interpreted on the basis of norms developed for that specific group. Also, certain phrases or behaviours may have multiple meanings and are likely to be misunderstood by the clients. Thus, the clinicians are required to have to sufficient knowledge of the client's cultural background and critically evaluate the tests to see if they are designed for use with the specific group to which the client belongs

### **PHYSIOLOGICAL ASSESSMENT:**

It is important to understand the biological basis of behaviour as all psychological problems are manifested in the body. Due to this physiological assessment becomes a part of the evaluative process.

### **Psychophysiological Assessment**

Psychophysiological assessment involves the use of instrumentation to monitor psychophysiological processes, based on the idea that psychological experiences are associated with definite physiological components such as changes in heart functioning, muscles, skin, brain, etc.

The electroencephalogram (ECG) is used to monitor whether the heart is functioning normally. A measure of the blood pressure gives an estimate of any excessive or damaging pressure of the blood against the walls of the blood vessels. This helps to assess the risk for developing any stress-related heart conditions.

The electromyography (EMG) is an instrument which is used to measure muscle tensing/contraction associated with stress and to rule out conditions such as headaches.

Individuals tend to sweat excessively when they are tensed - this leads to changes in the electrical properties of the skin and can be measured with the help of the galvanic skin response (GSR).

### **Brain Imaging Techniques**

Various techniques that construct pictures of the structure and function of the brain have been developed since the 1970s:

#### **The Electroencephalogram (EEG):**

The EEG measures the electrical activity in the brain that indicates one's level of arousal, that is, whether one is alert, resting, sleeping or dreaming.

The procedure involves pasting electrodes onto the scalp with an electricity-conducting gel. The machine picks up the brain activity and a device called the galvanometer, which has an ink pen attached to it, writes continuously creating wave-like patterns on moving paper strip.

The EEG shows a distinct pattern of brain waves depending on the mental activity one engages in. Thus, the EEG recording helps in assessing conditions such as epilepsy in which convulsions are caused by disturbed neural activity, sleep disorders, brain tumors, etc.

An abnormality in the EEG patterns is used as a basis for further investigations. In recent years computerised interpretations of the EEG have made objective evaluation possible. The computer can convert specific EEG patterns into colour-coded plots.

For example, low amplitude areas are shown in black or blue while high amplitude areas are highlighted in yellow and red. These colourful images help understand the

patterns of electrical activity throughout the surface of the brain and are useful for diagnosis

### **Computerised Axial Tomography (CAT CT scans):**

This is a technique in which one lies down with the head in a large X-ray tube. Highly focused beam of X-rays is then passed through the brain from many different angles. Differing densities of the different brain regions result in different deflections (bending) of the X-rays.

The deflection is greater in case of dense tissue such as bones and it is least in case of fluid. The X-ray detectors gather the readings taken from multiple angles and a computerised program constructs an image of the brain in the form of slices (tomo means 'slice' in Greek).

This method helps obtain a cross sectional slice of the brain from a specific angle or level. For example, CT scans can provide images such as the fluid filled ventricles in the brain, showing differences in the brains of people with and without Schizophrenia.

### **Magnetic Resonance Imaging (MRI):**

This technique uses magnetic fields and radio waves to produce high quality two or three dimensional images, based in the water content of the different tissues. The person undergoing an MRI lies inside a tunnel-like structure that surrounds the person with a strong magnetic field.

The activity of the electromagnetic energy from several angles, through a computer program is converted into a high resolution image of the scanned region. The MRI images are quite detailed and can detect tiny changes of structures within the body.

Using the MRI, trauma to the brain can be seen as bleeding or swelling. Sometimes tumours that go undetected in CT scans can be seen in MRI. It is also used in identifying brain dysfunction in specific disorders.

### **Functional Magnetic Resonance Imaging (fMRI):**

This is a new technique and a specialised MRI which relies on the idea that when an area of the brain becomes active due to mental processing, the blood flow to that region increases.

This scan is called ‘functional’ MRI because it shows the brain as it is functioning while performing a mental task and is therefore very useful in psychological assessment.

The fMRI produces images of the active brain regions when one processes information. This is done by showing regions with increased activity in different colours reflecting high and low levels of blood flow. The advantage of this technique is that it shows the brain in action rather than just its physical structures.

### **Positron Emission Tomography (PET), Single Photon Emission Computed Tomography (SPECT):**

This is another brain imaging technique that involves injecting a radioactively labelled compound into the person’s veins which binds itself to the oxygen in the blood.

This compound travels to the brain through the blood and emits positively charged electrons (positrons), which are detected by the scanner. A computer program then converts this into images showing the structure and function of organs and tissue.

Bright colours at the red end indicate greater activity in the brain while colours at the blue-green-violet end suggest lower activity. Thus, any kind of mental activity will result in lighting up a region of the brain.

### **Neuropsychological Assessment**

Neuropsychological assessment involves assessing brain functioning from how an individual performs on certain psychological tests.

The best known test battery in India, that is used for neuropsychological evaluation is the Neuropsychological test battery developed by NIMHANS, Bangalore.

The test is used to differentiate between the brain damaged individuals and the neurologically intact and comprises of subtests such as category test, tactical

performance test, rhythm test, speech-sounds perception test, time sense test, aphasia screening test, finger-oscillation test, etc. This may often be combined with the Personality Inventory to get a measure of the individual's personality and the Intelligence Tests to assess cognitive functioning.

## UNIT III: ANXIETY & MOOD DISORDERS

### Anxiety Disorders:

Anxiety is a complex and mysterious type of disorder in psychopathology. It is a subjective sense of unease, a set of behaviours or a physiological response originating in the brain. It is a mood state characterised by marked negative affect and somatic symptoms. A panic attack represents the alarm response of real fear but without any actual danger. Panic and anxiety combine to create different anxiety disorders. There is no simple one dimensional cause of excessive emotional reactions such as anxiety or panic. Causes come from different sources. There is strong evidence that a tendency to the tensed is inherited. Behaviorists view anxiety as a product of early classical conditioning. Different anxiety disorders such as GAD, OCD, PTSD, Phobias, etc., can be treated by different approaches such as biological, psychological, cognitive therapies, counseling, etc.

Most of the people have grown out of our childhood fears and our adulthood fears are mild, short-term, or reasonable. The fears of people with anxiety disorder are severe and lower the quality of their lives. Their fear are chronic and frequent enough to interfere with their functioning. Their fears are out of proportion to dangers that they truly face. Once this anxiety starts, it tends to feed on itself so that it might not stop even if the particular life stressor has long since passed.

### **Four types of symptoms determine the presence of anxiety-**

1. *Somatic symptoms* – muscle tension, heart palpitation, stomach pain etc.
2. *Emotional symptoms* – restlessness, fearfulness, irritability and constant watchfulness.
3. *Cognitive symptoms* – problems in taking decisions and concentration, fear of dying, loosing control, etc.

4. *Behavioural symptoms* – escapism in behaviour, aggressiveness, avoidance, etc.

There are different types of disorders where the main cause is anxiety and panic. Anxieties are consciously expressed or take some maladaptive forms like phobia, GAD, PTSD, etc.

### **Phobia: Panic Disorder**

#### **Symptoms of Panic Attacks**

Panic attacks, are short but intense periods in which individual experiences many symptoms of anxiety. Heart palpitations, trembling, a feeling of choking, dizziness, intense dread, and so on. Panic attacks may occur in the absence of any environmental triggers or in some people panic attacks are situationally predisposed. The person is more likely to have them in certain situations but does not always have them when in those situations. In all cases, however, the panic attack is a terrifying experience, causing a person intense fear or discomfort. The physiological symptoms of anxiety, the feeling of losing control, going crazy, or dying when panic attacks become a common occurrence. When the panic attacks are usually not provoked by any particular situation, and when a person begins to worry about having attacks and changes behaviours as a result of this worry, a diagnosis of panic disorder is made. Some people with panic disorder have many attacks in a short period of time. Less frequently, people who have panic disorder often fear that they have life – threatening illnesses. E.g., thyroid disorders, or with a cardiac disorder called mitral valve prolapse. Between 1.5 and 4 percent of people will develop panic disorder at some time in their lives. Most people who develop panic disorder usually do so sometime between late adolescence and their mid thirties. Many people with panic disorder also suffer from chronic generalised anxiety, depression, and alcohol abuse.

#### **Bio psychosocial Perspective**

One biological theory of panic disorder is that these people have over reactive autonomic nervous systems, which put them into a full flight-or-fight suspense with little provocation. This may be the result of imbalances in norepinephrine or serotonin or in hyper sensitivity to feelings of suffocation. There also is some evidence that panic disorder may be transmitted genetically.

Psychological theories of panic suggest that people who suffer from panic disorder pay very close attention to their bodily sensations, misinterpret bodily sensations in a negative way, and engage in snowballing, catastrophic thinking. This thinking then increases physiological activation, and a full panic attack starts.

Antidepressants and benzodiazepines have been effective in reducing panic attack and agoraphobic behaviour, but people tend to relapse into these disorders when they discontinue these drugs.

An effective cognitive – behavioural therapy has been developed for panic disorders. Clients are taught relaxation exercises and then learn to identify and challenge their catastrophic styles of thinking, often while having panic attacks induced in the therapy sessions. Systematic desensitisation techniques are used to reduce agoraphobic behaviour.

## **Phobias**

### **Agoraphobia :-**

The term agoraphobia is from the Greek for —fear of the market place. People with agoraphobia fear crowded, bustling places, such as the market place or in our times, the shopping mall. They also fear enclosed space, such as buses, subways, or elevators. Finally, they fear wide open spaces, such as open fields, particularly if they are alone. In general, they fear any place that they might have trouble escaping or getting help in an emergency i.e., panic attack. People with agoraphobia also often

fear that they will embarrass themselves if others see their symptoms of panic attack. In most cases, agoraphobia begins within one year after a person begins experiencing frequent anxiety symptoms. People with agoraphobia are unable to often get to the point, where they will not leave their own homes.

Agoraphobia strikes people in their youth. In one large study, more than 70 percent of the people who developed agoraphobia did so before the age of 25, and 50 percent developed the disorder before the age of 15 (Bourden et al. 1988).

### **Specific Phobias :-**

Most specific phobias fall into one of four categories, (APA, 2000) animal type, natural environment type, situational type, and blood – injection – injury type. When people with these phobias encounter their feared objects or situation, their anxiety is immediate and intense, and they may even have full panic attacks. Most phobias develop during childhood. Adults with phobias recognise that their anxieties are illogical and unreasonable, however children may not have his insight and just have the anxiety. Although as many as 04 in 10 people will have a specific phobia at some time, making it one of the most common disorders.

- a) **Animals type phobias** are focused on specific animal or insets, such as dogs, cats, snakes, or spiders. A snake phobia appears to be the most common type of animal phobia in the United States. People with phobias go to great lengths to avoid the objects of their fears.
- b) **Natural environment type phobia** are focused on events or situations in the natural environment, such as storms, heights, or water.
- c) **Situational type phobias** usually involve fear of public transportation, tunnels, bridges, elevators, flying, and driving. Claustrophobia, or fear of

enclosed spaces, is common situational phobia. People with situational phobias believe they might have panic attacks in their phobic situations.

- d) The final type, **blood-injection-injury type phobias**, was first recognised in DSM IV. People with this type of phobia, fear seeing blood or an injury, receiving an injection, or experiencing any other medical procedure.

## **Social Phobia**

People with social phobia fear being judged on embarrassing themselves in front of other people. Social phobia creates severe disruption in a person's daily life. People with a social phobia may avoid eating or drinking in public, for fear they will make noises when they eat, drop food, or otherwise embarrass themselves. They may avoid writing in public, including signing their names, for fear that others see their hands tremble. Men with social phobia will often avoid urinating in public bathrooms for fear of embarrassing themselves. People with social phobia tend to fall into three groups (Eng et al 2000) some people with social phobia fear only public speaking. Others have moderate anxiety about a variety of social situations finally, who have severe fear of many social situations, from speaking in public to just having a conversation with another person, are said to have a generalised type of social phobia.

Social phobia is relatively common, with about 8 percent of the U.S. adult population qualifying for the diagnosis in a 12 month period and one in eight people experiencing the disorder at some time in their lives (Kessler et. al., 1998, Schneier et. al, 1992) Women are somewhat more likely than men to develop this disorder.

Once it develops, social phobia tends to be a chronic problem if untreated. Most people with a social phobia do not seek treatment for their symptoms.

## **Obsessive Compulsive Disorder**

OCD is a type of anxiety disorder but differs from other anxiety disorders. The person shows either obsessions or compulsion, which are excessive and unreasonable.

### **Obsessions**

They are recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and inappropriate and that cause anxiety or distress.

### **Compulsions**

They are repetitive behaviours (such as hand washing, checking, etc.) or mental acts (such as praying, repeating words, etc.) that the person feels driven to perform in response to an obsession or according to rules that must be applied rigidly.

People with obsessive compulsive disorder experience anxiety when they have obsessions and when they cannot carry out their compulsions.

Common obsessions one focused on contamination, sex, violence and repeated doubts.

## **THEORIES OF OCD –**

**Biological theories** of OCD speculate that areas of the brain involved in the execution of primitive patterns of behaviour, such as washing rituals, may be impaired in people with OCD. These areas of the brain are rich in the neurotransmitter serotonin and drugs that regulate serotonin have proven helpful in the treatment of OCD.

**Psychodynamic theories** of OCD suggest that the obsessions and compulsions symbolises unconscious conflict or impulses and that the proper therapy for OCD involves uncovering these unconscious thoughts.

**Cognitive behavioral theories** suggest that people with OCD are chronically distressed, think in rigid and moralistic ways, judge negative thoughts as more acceptable than other people do, and feel more responsible for their thoughts and behaviours. This makes them unable to turn off the negative, intrusive thoughts that most people have occasionally. Compulsive behaviours develop through operant conditioning, people are reinforced for compulsive behaviours by the fact that they reduce anxiety.

#### **TREATMENTS OF OCD –**

**Drug Therapy :** The most effective drug therapies for OCD are the antidepressant known as selective – serotonin reuptake inhibitors.

**Cognitive Behavioural Therapies :** They have also proven helpful for OCD. These therapies expose OCD client to the content of their obsessions while preventing compulsive behaviour, the anxiety over the obsessions and the compulsions to do the behaviours are extinguished.

Unfortunately neither the drug therapies nor the cognitive. behavioural therapies tend to eliminate the obsessions and compulsions completely. The relapse rate with the drug therapies is high once the drugs are discontinued. Cognitive behavioural therapies help prevent relapse.

#### **General Anxiety Disorder**

People with GAD worry about many things in their lives. E.g., worry about their performance on the job, about how their relationships are going, and about their own health. The focus of their worries may shift frequently, and they tend to worry about many different things, instead of just focusing on one issue of concern. Their worry is

accompanied by many of the physiological symptoms of anxiety, including muscle tension, sleep disturbances, and a chronic sense of restlessness.

GAD is a relatively common type of anxiety disorder, with about 4 percent of the U.S. population experiencing it in any six-month period. The majority of people with GAD also develop another anxiety disorder, such as phobias or panic disorder and many experience depression as well.

## **Theories of Generalised Anxiety Disorder**

### **1. Psychodynamic Theories :-**

Freud (1917) developed the first psychological theory of generalised anxiety. He distinguished among three kinds of anxiety : realistic, neurotic, and moral. Realistic anxiety occurs when we face a real danger or threat, such as an oncoming tornado. Neurotic anxiety occurs when we are repeatedly prevented from expressing our id impulses, it causes anxiety. Moral anxiety occurs when we have been punished for expressing our id impulses, and we come to associate those impulses with punishment, causing anxiety. Generalised anxiety occurs when our defense mechanisms can no longer contain either the id impulses or the neurotic or moral anxiety that arises from these impulses.

More recent psychodynamic theories attribute generalised anxiety to poor upbringing, which results in fragile and conflicted images of the self and others. Children whose parents were not sufficiently warm and nurturing, and many have been overly strict or critical, may develop images of the self as vulnerable and images of others as hostile. As adults, their lives are filled with frantic attempts to overcome or hide their vulnerability, but stressors often overwhelm their coping capacities, causing frequent bouts of anxiety.

### **2. Humanistic and Existential Theories :-**

Carl Roger's humanistic explanation of generalised anxiety suggests that children who do not receive unconditional positive regard from significant others become overly critical of themselves and develop conditions of worth, harsh self-standards they feel they must meet in order to be acceptable. Throughout their lives, these people, then, strive to meet these conditions of worth by denying their true selves and remaining constantly vigilant for the approval of others. They typically fail to meet their self-standards, causing them to feel chronically anxious or depressed.

Existential theorists attribute generalised anxiety disorder to existential anxiety, a universal human fear of the limits and responsibilities of one's existence. Existential anxiety arises when we face the finality of death, the fact that we may unintentionally hurt someone, or the prospect that our lives have no meaning. We can avoid existential anxiety by accepting our limits and striving to make our lives meaningful, or we can try to silence that anxiety by avoiding responsibility or by conforming to other's rules. Failing to confront life's existential issues only leaves the anxiety in place, however, and leads us to —inauthentic lives.

### **3. Cognitive Theories :-**

Cognitive theories of GAD suggest that the cognitions of people with GAD are focused on threat, at both the conscious and non conscious levels. At the conscious level, people with GAD have a number of maladaptive assumptions that set them up for anxiety, such as —I must be loved or approved of by everyone, —It's always best to expect the worst, —People with GAD believe that worrying can prevent bad events from happening. These beliefs are often superstitions, but people with GAD also believe that worrying motivates them and facilitates their problem solving, yet people with GAD seldom get around to problem solving. Indeed, they actively avoid visual images of what they worry about, perhaps as a way of avoiding the negative emotion associated with those images.

Their maladaptive assumptions lead people with GAD to respond to situations with automatic thoughts, which directly stir up anxiety, cause them to be hyper vigilant, and lead them to overreact to situations.

**Mood Disorders:**

**Mood disorders involve disabling** disturbances in emotion—from the extreme sadness and disengagement of depression to the extreme elation and irritability of mania. The proposed DSM-5 recognizes two broad types of **mood disorders**: those that involve only depressive symptoms and those that involve manic symptoms. The DSM-5 proposes three new depressive disorders: mixed anxiety/depressive disorder, premenstrual dysphoric disorder, and disruptive mood dysregulation disorder.

**Diagnoses of Mood Disorders**

<b>DSM-5 Diagnoses</b>	<b>Likely Key Changes</b>	<b>Major Features</b>
Major depressive disorder	Bereavement-related symptoms are no longer excluded	Five or more depressive symptoms, including sad mood or loss of pleasure, for 2 weeks
Dysthymia	Chronic major depressive disorder is included in dysthymia	Low mood and at least two other symptoms of depression at least half of the time for 2 years
Mixed anxiety/depressive disorder	New category proposed for DSM 5	Symptoms of depression and anxiety are present, but diagnostic criteria for another anxiety or depressive disorder are not met
Premenstrual dysphoric disorder	New category proposed for DSM 5	Depressive or physical symptoms in the week before menses
Disruptive mood dysregulation disorder	New category proposed for DSM 5	Severe recurrent temper outbursts and persistent negative mood for at least 1 year beginning before age 10
Bipolar I disorder	Abnormally increased activity and energy included as a required	At least one lifetime manic episode

symptom of mania

Bipolar II disorder	Abnormally increased activity and energy included as a required symptom of hypomania	At least one lifetime hypomanic episode and one major depressive episode
Cyclothymia	No changes	Recurrent mood changes from high to low for at least 2 years, without manic or depressive episodes

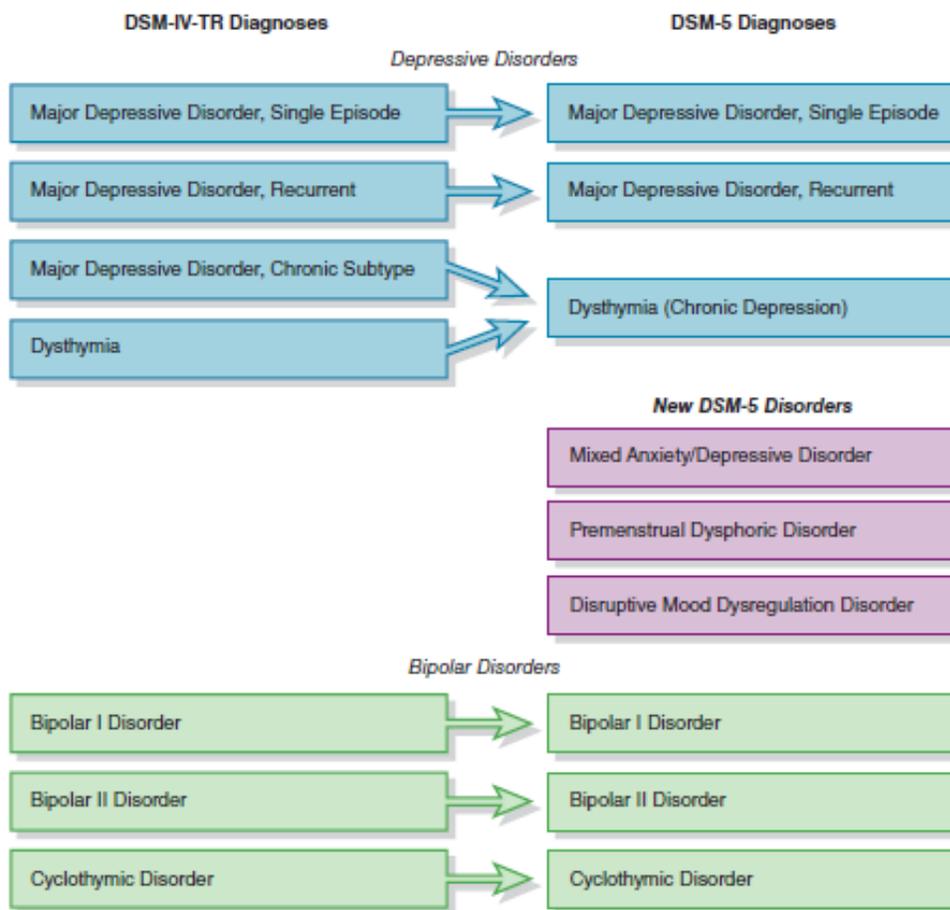
---

Source: Kring, Johnson, Davison & Neale (2012). *Abnormal Psychology*, 12<sup>th</sup> ed.  
Table 5.1, Chapter 5, pg. 132

**Depressive Disorders**

The cardinal symptoms of depression include profound sadness and/or an inability to experience pleasure. Most of us experience sadness during our lives, and most of us say that we are “depressed” at one time or another. But most of these experiences do not have the intensity and duration to be diagnosable.

**Diagnoses of Mood Disorders**



*Source:* Kring, Johnson, Davison & Neale (2012). *Abnormal Psychology*, 12<sup>th</sup> ed. Fig 5.1, Chapter 5, pg. 133

When people develop a depressive disorder, their heads may reverberate with self-recriminations. They may become focused on their flaws and deficits. Paying attention can be so exhausting that they have difficulty absorbing what they read and hear. They often view things in a very negative light, and they tend to lose hope.

Physical symptoms of depression are also common, including fatigue and low energy as well as physical aches and pains. These symptoms can be profound enough to convince afflicted persons that they must be suffering from some serious medical condition, even though the symptoms have no apparent physical cause. Although people with depression typically feel exhausted, they may find it hard to fall asleep and may wake up frequently. Other people sleep throughout the day. They may find that food tastes bland or that their appetite is gone, or they may experience an increase in appetite. Sexual interest disappears. Some may find their limbs feel heavy. Thoughts and movements may slow for some (**psychomotor retardation**), but others cannot sit still they pace, fidget, and wring their hands (**psychomotor agitation**). Beyond these cognitive and physical symptoms, initiative may disappear. Social withdrawal is common; many prefer to sit alone and be silent. Some people with depression neglect their appearance. When people become utterly dejected and hopeless, thoughts about suicide are common.

### **Major Depressive Disorder**

The proposed DSM-5 diagnosis of **major depressive disorder (MDD)** requires five depressive symptoms to be present for at least 2 weeks. These symptoms must include either depressed mood or loss of interest and pleasure. As shown in the

proposed DSM-5 criteria, additional symptoms must be present, such as changes in sleep, appetite, concentration or decision making, feelings of worthlessness, suicidality, or psychomotor agitation or retardation.

MDD is an **episodic disorder**, because symptoms tend to be present for a period of time and then clear. Even though episodes tend to dissipate over time, an untreated episode may stretch on for 5 months or even longer. For a small percentage of people, the depression becomes chronic—the person does not completely snap back to the prior level of functioning. Some people improve enough that they no longer meet the criteria for diagnosis of MDD but continue to experience subclinical depression for years

### **Proposed DSM-5 Criteria for Major Depressive Disorder**

- A. Sad mood or loss of pleasure in usual activities.
- B. At least five symptoms (counting sad mood and loss of pleasure):
  - Sleeping too much or too little
  - Psychomotor retardation or agitation
  - Weight loss or change in appetite
  - Loss of energy
  - Feelings of worthlessness or excessive guilt
  - Difficulty concentrating, thinking, or making decisions
  - Recurrent thoughts of death or suicide
- C. Symptoms are present nearly every day, most of the day, for at least 2 weeks.

Major depressive episodes tend to recur—once a given episode clears, a person is likely to experience another episode. About two-thirds of people with an episode of major depression will experience at least one more episode during their lifetime.

### *Chronic Depressive Disorder (Dysthymia)*

People with **dysthymia** are chronically depressed— more than half of the time for at least 2 years, they feel blue or derive little pleasure from usual activities and pastimes. In addition, they have at least two of the other symptoms of depression.

### **Proposed DSM-5 Criteria for Chronic Depressive Disorder (Dysthymia)**

- A. Depressed mood for most of the day more than half of the time for 2 years (or 1 year for children and adolescents).
- B. At least two of the following during that time:
  - Poor appetite or overeating
  - Sleeping too much or too little
  - Poor self-esteem
  - Low energy
  - Trouble concentrating or making decisions
  - Feelings of hopelessness
- C. The symptoms do not clear for more than 2 months at a time.

The DSM-IV-TR distinguishes chronic MDD from dysthymia, but DSM-5 criteria do not make this distinction. Rather, the DSM-5 combines these two chronic forms of depression. This places emphasis on the chronicity of symptoms, which has been shown to be a stronger predictor of poor outcome than the number of symptoms; among people who have experienced depressive symptoms for at least 2 years, those who do and do not have a history of major depressive disorder appear similar in their symptoms and treatment response

### *Epidemiology and Consequences of Depressive Disorders*

MDD is one of the most prevalent psychiatric disorders. MDD is twice as common among women as among men. Several social and psychological factors may help explain this gender difference.

- Twice as many girls as boys are exposed to childhood sexual abuse.

- During adulthood, women are more likely than men to be exposed to chronic stressors such as poverty and caretaker responsibilities.
- Acceptance of traditional social roles among girls may intensify self-critical attitudes about appearance.
- Adolescent girls worry more than adolescent boys about their body image, a factor that appears tied to depression
- Traditional social roles may interfere with pursuit of some potentially rewarding activities that are not considered “feminine.”
- Exposure to childhood and chronic stressors, as well as the effects of female hormones, could change the reactivity of the HPA axis, a biological system guiding reactions to stress.
- A focus on gaining approval and closeness within interpersonal relationships, which is more commonly endorsed by women, may intensify reactions to interpersonal stressors.
- Social roles promote emotion-focused coping among women, which may then extend the duration of sad moods after major stressors. More specifically, women tend to spend more time ruminating about sad moods or wondering about the reasons why unhappy events have occurred. Men tend to spend more time using distracting or action-focused coping, such as playing a sport or engaging in other activities that shake off the sad mood.

In all likelihood, gender differences in depression are related to multiple factors. In considering these issues, bear in mind that men are more likely to demonstrate other types of disorders, such as alcohol and substance abuse as well as antisocial personality disorder. Hence, understanding gender differences in psychopathology is likely to require attending to many different risk factors and syndromes.

Socioeconomic status also matters— that is, MDD is three times as common among people who are impoverished compared to those who are not. The prevalence of depression varies considerably across cultures, probably resulting from differences in cultural standards regarding acceptable expressions of emotional distress. For example, people in United States are more likely to describe a sad mood or suicidal thoughts than Indians. Rates of winter depression, or seasonal affective disorder, are

higher farther from the equator, where days are shorter. There is also a robust correlation of per capita fish consumption with depression; countries with more fish consumption, such as Japan and Iceland, have much lower rates of MDD and bipolar disorder. d, have much lower rates of MDD and bipolar disorder. Undoubtedly, cultural and economic factors, such as wealth disparity and family cohesion, play an important role in rates of depression as well.

The symptoms of depression vary somewhat across the life span. Depression in children often results in somatic complaints, such as headaches or stomachaches. In older adults, depression is often characterized by distractibility and complaints of memory loss.

Depression has many serious consequences where, suicide is a real risk. MDD is also one of the world's leading causes of disability. There is particularly strong evidence that depression is related to the onset and more severe course of cardiovascular disease.

### **Seasonal Affective Disorder: The Winter Blues**

Criteria for the seasonal subtype of MDD specify that a person experiences depression during two consecutive winters and that the symptoms clear during the summer.

For mammals living in the wild, a slower metabolism in the winter could have been a lifesaver during periods of scarce food. For some unlucky humans, though, this same mechanism might contribute to **seasonal affective disorder**. It is believed that seasonal affective disorder is related to changes in the levels of melatonin in the brain. Melatonin is exquisitely sensitive to light and dark cycles and is only released during dark periods. People with seasonal affective disorder show greater changes in melatonin in the winter than do people without seasonal affective disorder.

Fortunately, several treatment options are available for seasonal affective disorder. Like other subtypes of depression, seasonal affective disorder responds to antidepressant medications and cognitive behavioral therapy. Intriguingly, light therapy has been shown to help relieve depression even among those without a seasonal pattern to their depressions.

## **Bipolar Disorders**

The proposed DSM-5 recognizes three forms of bipolar disorders: bipolar I disorder, bipolar II disorder, and cyclothymic disorder. Manic symptoms are the defining feature of each of these disorders. The bipolar disorders are differentiated by how severe and long-lasting the manic symptoms are.

These disorders are labeled “bipolar” because most people who experience mania will also experience depression during their lifetime (mania and depression are considered opposite poles). An episode of depression is not required for a diagnosis of bipolar I, but it is required for a diagnosis of bipolar II disorder.

**Mania** is a state of intense elation or irritability accompanied by other symptoms shown in the diagnostic criteria. During manic episodes, people will act and think in ways that are highly unusual compared to their typical selves. They may become louder and make an incessant stream of remarks, sometimes full of puns, jokes, rhymes, and interjections about nearby stimuli that have attracted their attention. They may be difficult to interrupt and may shift rapidly from topic to topic, reflecting an underlying **flight of ideas**. During mania, people may become sociable to the point of intrusiveness. They can also become excessively self-confident. Unfortunately, they can be oblivious to the potentially disastrous consequences of their behavior, which can include imprudent sexual activities, overspending, and reckless driving. They may stop sleeping but stay incredibly energetic. Attempts by others to curb such excesses can quickly bring anger and even rage. Mania usually comes on suddenly over a period of a day or two.

The proposed DSM-5 also includes criteria for **hypomania**. *Hypo-* comes from the Greek for “under”; hypomania is “under”—less extreme than—mania. Although mania involves significant impairment, hypomania does not. Rather, hypomania involves a change in functioning that does not cause serious problems. The person with hypomania may feel more social, flirtatious, energized, and productive.

### **Proposed DSM-5 Criteria for Manic and Hypomanic Episodes**

- A. Distinctly elevated or irritable mood for most of the day nearly every day.  
Abnormally increased activity and energy.

B. At least three of the following are noticeably changed from baseline (four if mood is irritable):

- Increase in goal-directed activity or psychomotor agitation
- Unusual talkativeness; rapid speech
- Flight of ideas or subjective impression that thoughts are racing
- Decreased need for sleep
- Increased self-esteem; belief that one has special talents, powers, or abilities
- Distractibility; attention easily diverted
- Excessive involvement in activities that are likely to have undesirable consequences, such as reckless spending, sexual behavior, or driving

**For a manic episode:**

- Symptoms last for 1 week or require hospitalization
- Symptoms cause significant distress or functional impairment

**For a hypomanic episode:**

- Symptoms last at least 4 days
- Clear changes in functioning that are observable to others, but impairment is not marked
- No psychotic symptoms are present

**Bipolar I Disorder** In the proposed DSM-5, the criteria for diagnosis of bipolar I disorder (formerly known as manic-depressive disorder) include a single episode of mania during the course of a person's life. A person who is diagnosed with bipolar I disorder may or may not be experiencing current symptoms of mania. In fact, even someone who experienced only 1 week of manic symptoms years ago is still diagnosed with bipolar I disorder. Even more than episodes of MDD, bipolar episodes tend to recur. More than half of people with bipolar I disorder experience four or more episodes.

**Bipolar II Disorder** The proposed DSM-5 also includes a milder form of bipolar disorder, called **bipolar II disorder**. To be diagnosed with bipolar II disorder, a

person must have experienced at least one major depressive episode and at least one episode of hypomania.

### **Cyclothymic Disorder**

Also called *cyclothymia*, **cyclothymic disorder** is a second chronic mood disorder (the other is dysthymia). As with the diagnosis of dysthymia, the proposed DSM-5 criteria require that symptoms be present for at least 2 years among adults. In cyclothymic disorder, the person has frequent but mild symptoms of depression, alternating with mild symptoms of mania. Although the symptoms do not reach the severity of full-blown manic or depressive episodes, people with the disorder and those close to them typically notice the ups and downs. During the lows, a person may be sad, feel inadequate, withdraw from people, and sleep for 10 hours a night. During the highs, a person may be boisterous, overly confident, socially uninhibited and gregarious, and need little sleep.

#### **Proposed DSM-5 Criteria for Cyclothymic Disorder**

- A. For at least 2 years (or 1 year in children or adolescents):
  - Numerous periods with hypomanic symptoms that do not meet criteria for a manic episode
  - Numerous periods with depressive symptoms that do not meet criteria for a major depressive episode.
- B. The symptoms do not clear for more than 2 months at a time.
- C. Symptoms cause significant Distress or functional impairment.

Epidemiology and Consequences of Bipolar Disorders Bipolar I disorder is much rarer than MDD. It is extremely hard to estimate the prevalence of milder forms of bipolar disorder, because some of the most commonly used diagnostic interviews are not reliable. When researchers have reinterviewed people who met diagnostic criteria for bipolar II disorder using structured clinical interviews, the initial diagnosis of bipolar II disorder was confirmed for less than half of people. Bipolar disorders occur equally often in men and women, but women experience more episodes of depression than do men.

Bipolar I disorder is among the most severe forms of mental illnesses. People with bipolar disorders are at high risk for a range of other medical conditions, including cardiovascular disease, diabetes mellitus, obesity, and thyroid disease. Not only are medical problems present, they are often quite severe. People who have been hospitalized for bipolar I disorder are twice as likely to die from medical illnesses in a given year as are people without mood disorders. These sad consequences of bipolar disorders are not offset by evidence that hypomania is associated with creativity and achievement.

People with cyclothymia are at elevated risk for developing episodes of mania and major depression. Even if full-blown manic episodes do not emerge, the chronicity of cyclothymic symptoms takes a toll.

### **Etiology of Mood Disorders**

When we think of the profound extremes embodied in the mood disorders, it is natural to ask why these happen. Studies of etiology focus on why these disorders unfold. No single cause can explain mood disorders. A number of different factors combine to explain their onset.

While the diagnostic criteria specify several different depressive disorders and bipolar disorders, the research on etiology and treatment has tended to focus on major depressive disorder and bipolar I disorder.

### **Neurobiological Factors in Mood Disorders**

There are many different approaches to understanding the neurobiological factors involved in mood disorders. Bipolar disorder is highly heritable, and major depression is modestly heritable.

Neurotransmitter models focus on serotonin, dopamine, and norepinephrine. Current research focuses on receptor sensitivity rather than absolute levels of neurotransmitters. Receptor sensitivity is often tested by manipulating the levels of neurotransmitters. Tryptophan depletion studies indicate that deficits in serotonin receptors are associated with depression and bipolar disorder. It also appears that depression may be related to diminished dopamine receptor sensitivity and mania may be related to enhanced dopamine receptor sensitivity.

Neuroimaging studies suggest that depression and bipolar disorder are both associated with changes in regions of the brain that are involved in emotion. These changes seem consistent with a greater emotional reactivity (heightened activity of the amygdala) but less ability to regulate emotion (diminished activity of the dorsolateral prefrontal cortex and hippocampus, and greater activity of the subgenual anterior cingulate).

Major depressive disorder and bipolar disorder are both related to poor regulation of cortisol when assessed using the dex/CRH test. Cortisol dysregulation also predicts a more severe course of mood symptoms over time.

As noted, major depressive disorder and bipolar disorder seem similar on many of these biological variables. Compared to major depressive disorder, bipolar disorder may be uniquely related to increased sensitivity of the dopamine receptors, increased activity in a region of the brain called the striatum, and changes in protein kinase C, which influences the receptors and the membranes of neurons throughout the brain.

### *Social and Psychological Factors in Depression: Life Events and Interpersonal Difficulties*

Research strongly suggests that life events can trigger MDD. Because many people do not become depressed after a life event, researchers have studied diatheses that could explain vulnerability to life events.

Interpersonal research highlights the role of low social support, high expressed emotion, high need for reassurance, and poor social skills as risk factors for depression. Once a person becomes depressed, increases in reassurance seeking may lead to rejection from other people, potentially worsening depression.

Beyond social factors, psychological risk factors can help explain why some people become depressed. Evidence suggests that neuroticism, which involves high negative affect, predicts the onset of depression. Cognitive factors include a negative schema; negative beliefs about the self, world, and future; biases to attend to and recall negative rather than positive information; stable and global attributions for stressors that lead to hopelessness; and tendencies to ruminate. Prospective evidence supports each of these cognitive models.

**Beck's Theory** Aaron Beck (1967) argued that depression is associated with a **negative triad**: negative views of the self, the world, and the future. The “world” part of the depressive triad refers to the person’s own corner of the world—the situations he or she faces. For example, people might think “I cannot possibly cope with all these demands and responsibilities” as opposed to worrying about problems in the broader world outside of their life.

According to this model, in childhood, people with depression acquired negative schema through experiences such as loss of a parent, the social rejection of peers, or the depressive attitude of a parent. Schemas are different from conscious thoughts—they are an underlying set of beliefs that operate outside of a person’s awareness to shape the way a person makes sense of his or her experiences. The negative schema is activated whenever the person encounters situations similar to those that originally caused the schema to form.

Once activated, negative schemas are believed to cause **cognitive biases**, or tendencies to process information in certain negative ways. That is, Beck suggested that people with depression might be overly attentive to negative feedback about themselves.

They might have overly persistent memories of that negative feedback. Likewise, they might fail to notice or to remember positive feedback about themselves. People with a schema of ineptness might readily notice signs that they are inept and remember feedback that they are inept. Signs that they are competent, though, are not noted or remembered. Overall, people who are depressed make certain cognitive errors to arrive at biased conclusions. Their conclusions are consistent with the underlying schema, which then maintains the schema (a vicious circle).

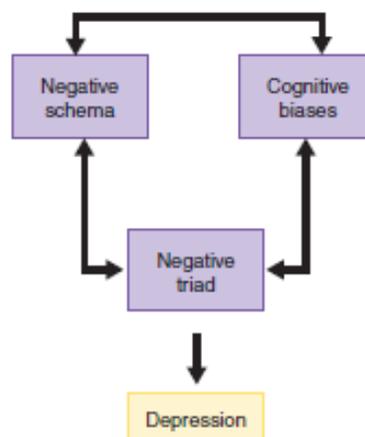


Figure: *The interrelationships among different kinds of cognitions in Beck's theory of depression.*

**Hopelessness Theory** According to **hopelessness theory**, the most important trigger of depression is hopelessness, which is defined as an expectation that (1) desirable outcomes will not occur and that

(2) the person has no responses available to change this situation.

Within this model, hopelessness is hypothesized to contribute to only one type of depression (hopelessness depression), which is defined by symptoms of decreased motivation, sadness, suicidality, decreased energy, psychomotor retardation, sleep disturbances, poor concentration, and negative cognitions.

Hopelessness is believed to be triggered by life events that have important consequences for the person and/or the person's self-evaluations. The model places emphasis on two key dimensions of **attributions**—the explanations a person forms about why a stressor has occurred:

- Stable (permanent) versus unstable (temporary) causes
- Global (relevant to many life domains) versus specific (limited to one area) causes

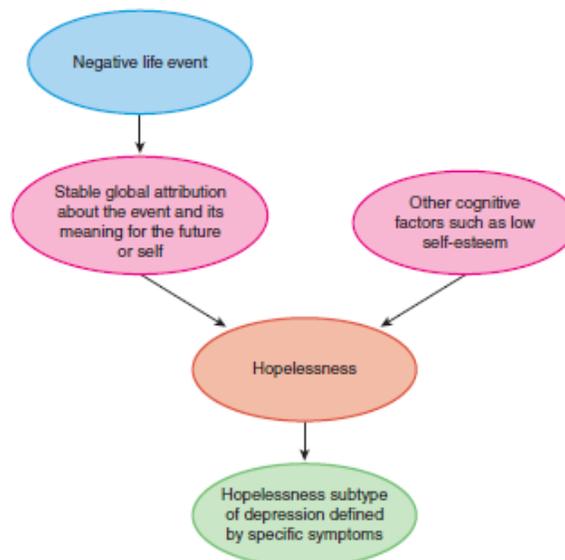


Figure: *Major elements of the hopelessness theory of depression*

People whose **attributional style** leads them to believe that negative life events are due to stable and global causes are likely to become hopeless, and this hopelessness will set the stage for depression. Within this model, it is acknowledged that negative attributions are accurate sometimes—a person may genuinely be facing a stressful situation that will be chronic and influence many aspects of his or her life. For some, low self-esteem promotes hopelessness by undermining their confidence that they can cope with life's challenges.

***Rumination Theory*** While Beck's theory and the hopelessness model tend to focus on the nature of negative thoughts, Susan Nolen-Hoeksema (1991) has suggested that a specific way of thinking called **rumination** may increase the risk of depression. Rumination is defined as a tendency to repetitively dwell on sad experiences and thoughts, or to chew on material again and again. The most detrimental form of rumination may be a tendency to brood or to regretfully ponder why an episode happened.

Tendencies to ruminate, as measured using self-report scales, have been found to predict the onset of major depressive episodes among initially non-depressed persons.

### **Treatment of Mood Disorders**

Most episodes of depression end after a few months, but the time may seem immeasurably longer to people with depression and to those close to them. With mania, even a few days of acute symptoms can create troubles for relationships and jobs. Moreover, suicide is a risk for people with mood disorders. Thus, it is important to treat mood disorders.

### **Psychological Treatment of Depression**

Several different forms of psychological treatment have been shown to help relieve depression.

### *Interpersonal Psychotherapy*

The core of this therapy is to examine major interpersonal problems, such as role transitions, interpersonal conflicts, bereavement, and interpersonal isolation. Typically, the therapist and the patient focus on one or two such issues, with the goal of helping the person identify his or her feelings about these issues, make important decisions, and make changes to resolve problems related to these issues. Like cognitive behavioral treatments, IPT is typically brief. Techniques include discussing interpersonal problems, exploring negative feelings and encouraging their expression, improving both verbal and nonverbal communications, problem solving, and suggesting new and more satisfying modes of behavior.

### *Cognitive Therapy*

In keeping with their theory that depression is caused by negative schema and cognitive biases, Beck and associates devised a cognitive therapy (CT) aimed at altering maladaptive thought patterns. The therapist tries to help the person with depression to change his or her opinions about the self. When a person states that he or she is worthless because “nothing goes right, and everything I try to do, end in a disaster,” the therapist helps the person look for evidence that contradicts this overgeneralization, such as abilities that the person is overlooking or discounting. The therapist also teaches the person to monitor self-talk and to identify thought patterns that contribute to depression. The therapist then teaches the person to challenge negative beliefs and to learn strategies that promote making realistic and positive assumptions. Often, the client is asked to monitor their thoughts each day and to practice challenging overly negative thoughts. Beck’s emphasis is on cognitive restructuring (i.e., persuading the person to think less negatively). Beck also includes a behavioral technique in his therapy called behavioral activation (BA), in which people are encouraged to engage in pleasant activities that might bolster positive thoughts about one’s self and life. For example, the therapist encourages patients to schedule positive events such as going for a walk and talking with friends.

### *Behavioral Activation (BA) Therapy*

BA was originally developed as a stand-alone treatment. This treatment was based on the idea that many of the risk factors for depression can result in low levels of positive reinforcement. That is, life events, low social support, marital distress, poverty, and individual differences in social skill, personality, and coping may all lead to low levels of positive reinforcement. As depression begins to unfold, inactivity, withdrawal, and inertia are common symptoms, and these symptoms will diminish the already low levels of positive reinforcement even further. Consequently, the goal of BA is to increase participation in positively reinforcing activities so as to disrupt the spiral of depression, withdrawal, and avoidance.

### *Behavioral Couples Therapy*

Depression is often tied to relationship problems, including marital and family distress. Drawing on these findings, researchers have studied behavioral couples therapy as a treatment for depression. In this approach, researchers work with both members of a couple to improve communication and relationship satisfaction. Findings indicate that when a person with depression is also experiencing marital distress, **behavioral couples therapy** is as effective in relieving depression as individual CT

### **Psychological Treatment of Bipolar Disorder**

Medication is a necessary part of treatment for bipolar disorder, but psychological treatments can supplement medications to help address many of its associated social and psychological problems. These psychotherapies can also help reduce depressive symptoms in bipolar disorder. Educating people about their illness is a common component of treating many disorders, including bipolar disorder and schizophrenia. **Psychoeducational approaches** typically help people learn about the symptoms of the disorder, the expected time course of symptoms, the biological and psychological triggers for symptoms, and treatment strategies. Studies confirm that careful education about bipolar disorder can help people adhere to treatment with

medications such as lithium. This is an important goal, because as many as half of people being treated for bipolar disorder do not take medication consistently. Beyond helping people be more consistent about their medications, psychoeducational programs have been shown to help people avoid hospitalization.

### **Biological Treatment of Mood Disorders**

A variety of biological therapies are used to treat depression and mania. The two major biological treatments are electroconvulsive therapy and drugs.

#### **Electroconvulsive Therapy for Depression**

Perhaps the most dramatic and controversial treatment for MDD is electroconvulsive therapy (ECT). For the most part now, ECT is only used to treat MDD that has not responded to medication. ECT entails deliberately inducing a momentary seizure and unconsciousness by passing a 70- to 130-volt current through the patient's brain. Formerly, electrodes were placed on each side of the forehead, a method known as bilateral ECT. Today, *unilateral ECT*, in which the current passes only through the nondominant (typically the right) cerebral hemisphere, is often used because side effects are less pronounced. In the past, the patient was usually awake until the current triggered the seizure, and the electric shock often created frightening contortions of the body, sometimes even causing bone fractures. Now the patient is given a muscle relaxant before the current is applied. The convulsive spasms of muscles are barely perceptible, and the patient awakens a few minutes later remembering nothing about the treatment. Typically, patients receive between 6 and 12 treatments, spaced several days apart.

Even with these improvements in procedures, inducing a seizure is drastic treatment. Why should anyone agree to undergo such radical therapy? The answer is simple. ECT is more powerful than antidepressant medications for the treatment of depression, particularly when psychotic features are present even though we don't know why it works. Most professionals acknowledge that people undergoing ECT face some risks of short-term confusion and memory loss. It is fairly common for patients to have no memory of the period during which they received ECT and sometimes for the weeks surrounding the procedure. Unilateral ECT produces fewer

cognitive side effects than bilateral ECT does . Nonetheless, even unilateral ECT is associated with deficits in cognitive functioning 6 months after treatment. In any case, clinicians typically resort to ECT only if less drastic treatments have failed. Given that suicide is a real possibility among people who are depressed, many experts regard the use of ECT after other treatments have failed as a responsible approach.

### *Medications for Depressive Disorders*

Medication treatment is the first line of defense against bipolar disorder. The best-researched mood stabilizer is lithium, but anticonvulsants and antipsychotic medications are also effective mood stabilizers. Recent findings cast doubt on whether antidepressant medication is helpful in bipolar disorder. Some psychological treatments may help when offered as supplements to medications for the treatment of bipolar disorder. The best-validated approaches include psychoeducational approaches, CT, and family therapy (FFT). IPT has fared well in one large trial as well. These treatments appear particularly helpful in improving adherence to medication regimens and relieving depressive symptoms within bipolar disorder.

### **Suicide**

No other kind of death leaves friends and relatives with such long-lasting feelings of distress, shame, guilt, and puzzlement as do suicide. Survivors have an especially high mortality rate in the year after the suicide of a loved one.

Suicidal ideation refers to thoughts of killing oneself and is much more common than attempted or completed suicide. Suicide attempts involve behaviors that are intended to cause death but do not result in death. **Suicide** involves behaviors that are intended to cause death and actually do so. **Non-suicidal self-injury** involves behaviors that are meant to cause immediate bodily harm but are not intended to cause death.

### *Models of Suicide*

Suicide is such a complex and multifaceted act that no single model can hope to explain it. Myths about suicide abound, highlighting the need for careful research. The study of suicide involves many different ethical questions and forces people to

consider their own views on life and death. Psychological Disorders Suicide is discussed in this chapter because many persons with mood disorders have suicidal thoughts and some engage in suicidal behaviors.

### *Neurobiological Models*

Twin studies suggest that heritability is about 48 percent for suicide attempts. Adoption studies also support the heritability of suicidality.

Just as low levels of serotonin appear related to depression, there is a connection between serotonin and suicide. Low levels of serotonin's major metabolite, 5-HIAA, have been found among people who committed suicide. Serotonin dysfunction appears particularly relevant for understanding violent suicide. That is, violent forms of suicide have been found to be related to particularly low 5-HIAA levels in postmortem assays and to a polymorphism of the serotonin transporter gene (5-HTTLPR). These findings suggest that serotonin dysfunction may increase the risk of violent suicide.

Beyond the serotonin system, other research has found that among patients with MDD, those who had an abnormal dexamethasone suppression test response had a 14-fold increase in the risk of suicide over the next 14 years.

**Social Factors** Economic and social events have been shown to influence suicide rates. As one example, across the past 100 years, suicide rates have been shown to increase modestly during economic recessions. Some of the strongest evidence for the role of the social environment in suicide comes from the major effects of media reports of suicide.

### *Psychological Models*

Suicide may have many different meanings. It may be intended to induce guilt in others, to force love from others, to make amends for wrongs, to rid oneself of unacceptable feelings, to rejoin a dead loved one, or to escape from emotional pain or an emotional vacuum. Undoubtedly, the psychological variables involved in suicide vary across people, but many researchers have attempted to identify risk factors that operate across people.

Several researchers relate suicide to poor problem solving. Problem-solving deficits do predict suicide attempts prospectively. Problem-solving deficits also relate to the seriousness of previous suicide attempts, even after controlling for depression severity, age, and intellectual functioning.

One might expect that a person who has trouble resolving problems would be more vulnerable to hopelessness. Hopelessness, which can be defined as the expectation that life will be no better in the future than it is now, is strongly tied to suicidality. High levels of hopelessness are associated with a fourfold elevation in the risk of suicide, and hopelessness is important even after controlling for depression levels.

Beyond these negative characteristics (e.g., poor problem solving, hopelessness), positive qualities may motivate a person to live and help a clinician build a case for choosing life. While many people think about suicide, relatively few engage in suicidal actions. Additional variables seem to predict the switch from thinking about suicide to acting on those thoughts. Among people who are experiencing suicidal thoughts, hundreds of studies document that people who are more impulsive are more likely to attempt suicide or to die from suicide. While intense distress and hopelessness might set off thoughts about suicide, suicidal actions might be driven by other factors, such as impulsivity.

### *Preventing Suicide*

Many people worry that talking about suicide will make it more likely to happen. Rather, clinicians have learned that it is helpful to talk about suicide openly and matter-of-factly. Giving a person permission to talk about suicide may relieve a sense of isolation. More progressive schools have implemented outreach programs to allow students a chance to discuss these thoughts. Some offer web-based counseling to allow students to remain anonymous. Among those who attempt suicide but do not die, 80 percent report within the next 2 days that they are either glad to be alive or ambivalent about whether they want to die.

### *Treating the Associated Psychological Disorder*

One approach to suicide prevention builds on our knowledge that most people who kill themselves are suffering from a psychological disorder. Thus when Beck's cognitive approach successfully lessens a patient's depression, that patient's suicidal risk is also reduced. Marsha Linehan's dialectical behavior therapy with borderline patients provides another example of a treatment that is designed for a specific disorder but also provides protection from suicide.

Cognitive behavioral approaches appear to be the most promising therapies for reducing suicidality. These programs have been found to reduce the risk of a future attempt among suicide attempters by 50 percent compared to treatment as usually offered in the community. They have also been found to reduce suicidal ideation.

Cognitive behavioral treatments include a set of strategies to prevent suicide. Therapists help clients understand the emotions and thoughts that trigger urges to commit suicide. Therapists work with clients to challenge their negative thoughts and to provide new ways to tolerate emotional distress. They also help clients problem solve about the life situations they are facing. The goal is to improve problem solving and social support and thereby to reduce the feelings of hopelessness that often precede these episodes. Therapists are expected to take reasonable precautions when they learn a patient is suicidal. One approach to keeping such patients alive is to hospitalize them as a short-term means of keeping them safe until they can begin to consider ways of improving their life.

### **UNIT IV: SOMATOFORM & DISSOSIATIVE DISORDERS**

Somatoform disorders are those disorders in which an individual complains of bodily symptoms but for which there is no clear-cut identifiable physical cause. Somatoform disorders include a variety of conditions in which conflict becomes translated in to physical problems or complaints that cause distress or impairment in a person's life. Psychologists have known Somatoform disorders since a long time. The term —somal refers to body and somatoform disorders are those bodily disorders for which there is no biological basis for physical complaints and the cause is largely a result of psychological factors. Somatoform disorders can be defined as an anxiety

based pattern in which an individual complains of bodily symptoms that suggest the presence of a physical problem, but for which no organic basis can be found. Health professionals find it difficult distinguishing between a physical cause and a psychological cause when it comes to understanding bodily symptoms. DSM-IV has identified many different forms of somatoform disorders. These include: Conversion disorder, Somatisation disorder and related conditions, Body dysmorphic disorder, Hypochondriasis, etc.

### **Conversion Disorder:**

Conversion disorder involves a translation of unacceptable drives or troubling conflicts in to bodily motor or sensory symptoms that suggest neurological or other kinds of medical conditions. The essential feature of this disorder is an involuntary loss or alteration of a bodily function due to psychological conflict or need, causing the individual to feel seriously distressed or to be impaired in social, occupational or other important areas of life. It should be remembered that the person is not intentionally producing the symptoms. Clinicians cannot establish a medical basis for the symptoms and it appears that the person is converting the psychological conflict or need in to a physical problem.

This disorder was earlier called as hysteria and it involves a neurotic pattern in which symptoms of some physical malfunctioning or loss of control appear without any underlying organic pathology. In 1850s a French physician Paul Briquet systematically described and categorized various symptoms of hysteria based on his review of about 400 patients. Jean Martin Charcot used the technique of hypnosis to show that psychological factors played a role in the physical symptoms of hysteria. Pierre Janet and Hyppolyte Marie Bernheim did considerable work on hysteria and enhanced our understanding about it. Sigmund Freud developed a radically different theory of hysteria. He called it as hysterical neurosis.

According to Barlow and Durand (2000) conversion disorder can be defined as physical malfunctioning such as blindness or paralysis suggesting neurological impairment but with no organic pathology to account for it.

Conversion disorders were once relatively common in civilian and especially in military life. In World War I, conversion disorders were the most frequently diagnosed psychiatric syndrome among soldiers. It was also relatively common during World War II.

Statistical details reveal that conversion disorder may occur in conjunction with other disorder particularly Somatisation disorder. This disorder is common among women and generally develops during adolescence. These disorders are common among soldiers exposed to combat.

Conversion disorders typically occurred under highly stressful combat conditions and involved men who would ordinarily be considered stable.

The symptoms of conversion disorder are multiple. All these symptoms of conversion disorder can be grouped into three broad categories. These are as follows:

**A) *Sensory Symptoms:*** Some of the sensory symptoms involved in conversion disorder are as follows:

- Anesthesia: loss of sensitivity.
- Analgesia: loss of sensitivity to pain.
- Hypesthesia: partial loss of sensitivity.
- Hyperaesthesia: excessive sensitivity.

Ironside and Bachelor (1945) found the following sensory symptoms among conversion disorders. These are blurred vision, photophobia, double vision, night

blindness, jumping of print during attempts to read, etc. These researchers also found that the symptoms of each airman (whom they studied) were closely related to his performance duties. Night fliers were more subject to night blindness, while day fliers more often developed failing day vision.

**B) Motor Symptoms:** Some common motor symptoms found among conversion disorder are as follows:

- i. Paralysis: Such a behavior is usually confined to only one arm or leg and the loss of function is usually selective for e.g. writer's cramp, ticks (localized muscular twitches).
- ii. Contractors: Such a behavior involves flexing a finger and toes or rigidity of the larger joints such as elbows and knees. Paralysis and contractors frequently lead to walking disturbances.
- iii. Aphonia: is a most common speech disturbance. In this disorder an individual is able to talk only in whispers and mutism.
- iv. Convulsion: This is an occasional motor symptom. However, people with hysterical convulsion show features or the usual characteristics of true epileptics.

**C) Visceral Symptoms:** Visceral conversion reactions also cover a wide range of symptoms, including headaches —lump in the throat (formerly known as globus hystericus) and choking sensations, coughing spells, difficulty in breathing, cold and clammy extremities, bleaching, nausea, vomiting, and so on. Occasionally, persistent hiccoughing or sneezing occurs.

Accurate diagnosis of conversion disorder is a difficult task because conversion disorder can simulate every known disease. Conversion disorder can be distinguished from organic disorder on the basis of the following points.

1. ***La Belle Indifference:*** This means that those who have conversion disorder are unconcerned about the long-range effects of their disabilities. Individuals with organic disorder are very much concerned about the long-range effect of their symptoms.
2. ***Selective nature of the dysfunctioning:*** Individuals who have conversion disorder are highly selective with respect to symptom pathology. For example, in conversion blindness, an individual does not usually bump into people or objects;

—paralyzed, muscles can be used for some activities but not others; and controlled contractors usually disappear during sleep.

3. ***Under hypnosis or narcosis:*** The interesting fact that under hypnosis or narcosis (a sleep like state induced by drugs) the symptoms can usually be removed, shifted, or reinduced by the suggestion of the therapist. Similarly, if the individual is suddenly awakened from a sound sleep, he or she may be tricked into using a —paralyzed limb.

In the development of a conversion disorder, the following chain of events typically occurs:

- a) A desire to escape from some unpleasant situation.

- b) A feeling or a wish to be sick in order to avoid the situation (this wish, however is suppressed as unfeasible or unworthy); and under additional or continued stress.
  
- c) The appearance of the symptoms of some physical ailment. The individual sees no relation between the symptoms and the stress situation. The particular symptoms that occur are usually those of a previous illness or are copied from other sources, such as symptoms observed among relatives, seen on television, or read about in magazines.

Conversion disorders seem to stem from feelings of guilt and the necessity for self-punishment. Those who suffer from conversion disorder also suffer from a dissociative disorder. It is difficult to diagnose conversion disorder. Individuals suspected of conversion disorder must be given a thorough neurological examination in addition to follow up to determine whether a client's symptoms represent an underlying medical condition.

### **Somatisation Disorder and Related Conditions:**

Somatisation disorder involves the expression of psychological issues through bodily problems that cannot be explained by any known medical condition or as being due to the effects of a substance.

The difference between somatization disorder and conversion disorder is that somatisation disorder involves multiple and recurrent bodily symptoms rather than a single physical complaint.

This condition generally, which is relatively rare, first appears before the age of 30 years and leads to problems in the areas of social, occupational and

interpersonal functioning. Individuals suffering from this disorder generally tend to be from lower socioeconomic classes.

This disorder was earlier called as Briquet's Syndrome, after the famous French physician, Pierre Briquet who in 1859 described patients who has multiple somatic complaints for which he could not find any medical cause. Somatisation disorder was known as

Briquet's syndrome for more than 100 years and was called as somatisation disorder for the first time only in 1980s in the DSM- III. In this disorder there are repeated and multiple vague somatic complaints for which there is no physiological cause. This is a very rare disorder and occurs on a continuum.

Two important points with respect to somatisation disorder are as follows:

- Majority of the individuals with somatisation disorder tend to be women, unmarried and from lower socioeconomic groups.
- In addition to a variety of somatic complaints, individuals may also have psychological complaints, usually anxiety or mood disorders.

**Clinical Description:** The common complaints in this disorder are pseudoneurological

i. e. neurological disorder without organic neurological causes like double vision, or headache, allergies, nausea, stomach problem, and menstrual and sexual difficulties.

Such people experience pain and sickness in exaggerated manner. It has been demonstrated that individuals with somatisation disorder tend to be women, unmatured and from lower socio economic status.

This disorder shares a number of features with Antisocial Personality Disorder.

These are as follows:

- Both these disorders begin early in life.
- They both run a typical chronic course.
- They both predominate among lower socioeconomic classes.
- Both are difficult to treat.
- Both these disorders are associated with marital discord, drug and alcohol abuse and suicide attempts.

**Causes:** Some important causes of this disorder are as follows:

1. *Genetic factors:* Early studies of possible genetic contributions have had shown mixed results. For e.g. Torgerson (1986) found no increased prevalence of somatisation disorder in monozygotic pairs. However, most recent studies have found that this disorder run in families and may have a heritable basis. It has also been observed that Somatisation Disorder is strongly linked in family and genetic studies to Antisocial Personality Disorder.

*Early Learning:* Somatisation disorder is a learned disorder. Individuals learn from significant others, and through role modeling, significant somatic symptoms that are characteristic of these disorders.

3. *Neurobiological Factors:* Jeffrey Gray and his associates

(1985) have implicated neurophysiological factors in the development of somatisation disorder. According to him Somatisation Disorder and Antisocial

Personality Disorder share a neurobiological based disinhibition syndrome. A variety of neurophysiological evidence suggests a dysfunction in the brain circuit in somatisation disorder.

According to Widom (1984) and Colniger (1987) in the occurrence of somatisation disorder, social and cultural factors too play an important role. Gender roles encourage development of somatisation disorder in women in many cultures.

**Treatment:** Treatment of somatisation disorder is exceedingly difficult and there are no treatments with proven effectiveness that seem to cure the syndrome. Barlow et al (1992) have pointed out that somatisation disorder can be better managed by providing patients with the following:

- Providing reassurance.
  
- Reducing stress.
  
- Reducing the frequency of help-seeking behavior.

People with somatisation disorder do not voluntarily seek psychotherapy. They seek psychotherapy only on the insistence from their physician. The prognosis of this disorder is generally poor.

**Pain Disorder:**

It is one variant of somatisation disorder in which instead of the multiple somatic complaints, individual demonstrates only one symptom, i.e. pain. The pain causes intense personal distress or impairment. The client is not faking pain. In some cases of pain disorder there may be a diagnosable medical condition but the reported experience of pain is more than what can be normally seen.

In pain disorder there may have been a clear physical reason for pain at least initially, but psychological factors play a role in maintaining it. An important feature of pain disorder is that the pain is real and it hurts regardless of the cause. Since it is a new and a separate category more research on it is needed to increase our understanding of this disorder.

People with pain disorder are likely to become dependent on substances, either illicit drugs or prescription medications, in their effort to alleviate their discomfort.

### **Body Dysmorphic Disorder:**

Individuals having this disorder have distorted negative concerns about their bodies. They are preoccupied, almost to the point of being delusional, with the idea that a part of their body is ugly or defective. They are so concerned with distress about their bodily problem that their work, social life and relationships are impaired. They may be abnormally worried about the texture of their skin, too little facial hair, or they feel that there is deformity in the shape of their nose, mouth, jaw or eyebrow.

This is an imaginative disorder. This disorder is also called as —imagined ugliness (Phillips, 1991). It is a somatoform disorder in which there is an excessive preoccupation with some imagined defect in appearance by some one who actually looks reasonably normal.

The prevalence of this disorder is hard to estimate since by its very nature it tends to be kept a secret. This disorder is more commonly found among females; however, in Japan more males experience this disorder. This disorder occurs in adolescence and peaks at the age of 18 or 19 years.

**Clinical Description:** Individuals with this disorder show the following symptoms:

- People with this disorder become fixated on mirrors. They often view themselves in a mirror to check as if any change is taking place in them.

- As a result of this disorder, individuals indulge in suicidal ideation as well as suicidal attempt and even actual suicide.
- They have —ideas of referencell, i.e. they think that everything that goes on in their world is somehow related to them.
- Their psychopathology lies in their reacting to a deformity that others cannot perceive.
- They are also concerned with the width of their face
- Individuals having this disorder are the one's who do not conform to the current cultural practices of their bodily features.

**Causes:** The etiology of this disorder is not well known. There is no data available to indicate whether this disorder run in families or whether there is biological or psychological predisposition to this disorder.

The pattern of comorbidity with other disorders does give us some indication about the etiology of this disorder. This disorder co-occurs with hypochondriasis, however it does not co-occur with other somatoform disorders, nor does it occur in family members of patients with other disorders. A disorder that has been frequently found to co-occur with Body Dysmorphic Disorder is the Obsessive Compulsive Disorder.

Body Dysmorphic Disorder has considerable degree of similarity with Obsessive Compulsive Disorder. Some important points are as follows:

- i) Individuals with Body Dysmorphic Disorder often complain of persistent, intrusive and horrible thoughts about their appearances, and they engage in

such compulsive behaviours as repeatedly looking in mirrors to check their physical features.

ii) Body Dysmorphic Disorder and Obsessive Compulsive Disorder also have approximately the same age of onset and run the same course.

iii) The treatment of these two disorders is also the same. Medically the drug that block the reuptake of serotonin, such as Clomipramine (Anafranil) and fluoxetine (Prozac) are useful in both these disorders. Similarly, exposure and response prevention, the type of cognitive behavior therapy that is effective with Obsessive Compulsive Disorder, has also been successful with Body Dysmorphic Disorder.

**Treatment:** Psychological treatment of this disorder consists of bringing about a cognitive change in the individual. Among the medical treatment Plastic surgery is the most common. Preliminary research suggests that as many as 2% of all the patients who request plastic surgery may have this disorder. It has also been noted that surgery on people with Body Dysmorphic Disorder seldom produced the desired results and these people return for additional surgery on the same defect, or concentrate on some new defect.

Recent research (1993) has revealed that preoccupation with imagined ugliness actually increased in people who had plastic surgery, dental procedures or special skin treatments for their perceived problems.

### **Hypochondriasis:**

Those suffering from hypochondriasis believe or fear that they have a serious illness, when in fact they are merely experiencing normal bodily reactions. Unlike conversion disorder or somatisation disorder, hypochondriasis does not involve extreme bodily dysfunction or unexplainable medical symptoms.

It is one type of somatoform disorder, which is characterized by multiple complaints about possible physical illness where no evidence for such illness can be found. In hypochondriasis anxiety is a result on one's preoccupation with bodily symptoms misinterpreting them as indicative of illness or disease, etc. Since the preliminary symptoms of this disorder are generally of health concerns, an individual with this disorder is likely to visit a family physician.

In hypochondriasis an individual has a severe anxiety, which is focused on the possibility of having a serious disease.

**Clinical Description:** Those who suffer from hypochondriasis show the following symptoms:

- i. They have an unrealistic interpretation of relatively common physical complaint.
- ii. Their complaints are not restricted to any logical symptoms.
- iii. They have trouble in giving precise description of their symptoms.
- iv. They read a lot on medical topics and feel certain that they are suffering from every new disease they read or hear about.
- v. They believe that they are seriously ill and cannot recover. As their symptoms have no physical causes, no treatment is possible. Hence, they keep on changing their physician until the physician treats the disorder, which does not exist at all.
- vi. These patients are so preoccupied with their health, that many of them keep detailed information about diet, functioning of body, etc. Besides, they also

keep themselves well informed about the latest medical treatments by reading popular newspaper and magazines.

vii. Usually this disorder occurs after the age of thirty.

viii. Hypochondriacal individuals show a morbid preoccupation with digestive and excretory functions. These individuals have an abnormal preoccupation with disease.

Hypocondriasis differs from somatisation disorder on the following grounds.

- a. It occurs after the age of 30 years.
- b. The abnormal concerns of hypochondriacal individuals are vague, general, and do not focus on particular set of symptoms.
- c. Hypochondriacal persons have a belief that they have a serious disorder, which is unique.

Since in this disorder there is preoccupation with physical symptoms, individuals are more likely to visit family physicians.

They come to the attention of mental health experts only when all relevant medical conditions concerned with the presenting physical complaints are ruled out.

Research studies indicate that hypochondriasis shares many features with anxiety disorders, particularly panic disorders. These two disorders are frequently comorbid i.e. individuals with a hypochondriacal disorder have an additional diagnosis of anxiety disorder.

In hypochondriacal disorder an individual is preoccupied with bodily symptoms, misrepresenting them as indicative of illness or disease. Any physical sensation, experienced by such individuals can become a basis of concern for individuals.

In spite of best efforts by the doctors to convince the individual that nothing is medically wrong with him and the disorder is more psychological in nature; the patient is not able to understand this.

Patients having hypochondriasis are distinguished from those having illness Phobia. Illness Phobia is future oriented, i.e. individuals who fear developing a disease is said to have illness Phobia. On the other hand hypochondriasis is a current anxiety about a presumed illness. In other words, individuals who mistakenly believe they currently have a disease are diagnosed as having hypochondriasis.

**Causes of Hypochondriasis:** Some important causes of hypochondriasis are as follows:

*Disorder of Cognition and Perception:* Hypochondriasis is a disorder of cognition and perception with strong emotional contributions. Individuals with hypochondriasis pay undue attention to physical sensations that are common to all normal individuals. They quickly focus their attention on these sensations. The very fact of focusing attention of their self increases their

arousal and makes physical sensations seem more intense than they actually are. For e.g. a minor headache may be interpreted as a sign of brain tumor.

*Increased Perceptual Sensitivity:* Experiments using the stroop test has revealed that individuals having hypochondriasis show enhanced perceptual sensitivity to illness cues. They also tend to interpret ambiguous stimuli as threatening.

*Integrated Approach:* It should be remembered that no single biological or psychological cause can be implicated in this disorder. Researchers have pointed out that the fundamental causes of hypochondriasis are similar to those implicated in the anxiety disorder.

According to Cote et al (1996) three important factors related to the etiology process of this disorder are as follows:

- i. Hypochondriasis seems to develop in the context of stressful life events. Such events often involve death or illness.
- ii. People who develop hypochondriasis tend to have had a disproportionate incidence of disease in their family when they were children.
- iii. Important interpersonal and social influence also plays an important role in the development of hypochondriasis. For e.g. some people who come from families where illness is a major issue seem to have learned that an ill person is often paid increased attention. Hence, they develop illness.

**Treatment:** Some important points related to treatment of this disorder are as follows:

- i) Our knowledge about the treatment of this disorder is limited. Scientifically controlled studies are very rare.

- ii) Treatment of this disorder consists of identifying and challenging illness related misinterpretation of physical sensations and on showing the patient how to create —symptoms|| by focusing attention on certain body areas.
- iii) Psychoanalysis has been found to be less effective with this type of disorder. Ladee (1966) found that only four out of the 23 patients with this type of treatment improved.
- iv) Kellner (1992) found that reassurance seems to be effective in some cases, especially when it is given by a medically trained person such as a family physician.
- v) Participation in support groups (i.e. group therapy or counselling) can also be of considerable benefit for such patients.

### **Theories and Treatment of Somatoform Disorder:**

Causes and treatment of each of the somatoform disorder has been discussed above. However it is important to understand as to what motivates people to appear sick. Psychologists explain motives with the help of primary gain and secondary gain. Primary gain is avoidance of burdensome responsibilities because one is —disabled||. Secondary gain is the sympathy and attention the sick person receives from other people.

Somatoform disorders can best be explained as interplay of biological factors, learning experiences, emotional factors and faulty cognitions. According to this integrative approach, childhood events set the stage for the later development of symptoms.

Most contemporary approaches to treating somatoform disorders involve exploring a person's need to play the sick role, evaluating the contribution of stress in the person's life and providing clients with cognitive behavioural techniques to control their symptoms. Medication can also be

used in certain cases. For some patients with somatisation disorder, antidepressant medications can serve an important role in treatment.

## **DISSOCIATIVE DISORDERS**

Dissociative disorders are one of the most attractive disorders that have received considerable media attention. Dr. Sigmund Freud and Morton Prince carried out some pioneering studies on this disorder. The dissociative disorder refers to a group of related disorders in which there is certain altered states of consciousness. The dissociative disorder are described in DSM-IV as sudden temporary alterations in the normally integrative functioning of consciousness, identity or motor behavior. Dissociative disorders are characterised by alterations in perceptions: a sense of detachment from one's self from the world or from memories.

Dissociative disorders are an extreme form of psychological disturbance involving anxiety and conflict in which part of an individual's personality actually separates from the rest of his or her conscious functioning. An individual with dissociative disorder experiences a temporary alteration in consciousness involving a loss of personal identity, decreased awareness of immediate surroundings and odd bodily movements. Once the dissociation has occurred, the content of the dissociated part becomes inaccessible to the rest of the client's conscious mind.

Some of the most common types of dissociative disorders include: Dissociative Identity Disorder, Dissociative Amnesia, Dissociative Fugue, Depersonalization Disorder, Dissociative Trance Disorder, etc. We would discuss the different variants of dissociative disorders.

### **Dissociative Identity Disorder (DID):**

It is the most interesting and dramatic of all the dissociative disorder and was earlier called as multiple personality disorder. In Dissociative Identity Disorder a person develops more than one self or personality. These personalities are referred to as alters, in contrast to the core personality, the host. In this disorder many, say more than 100 personalities or fragments of personality coexist within one body and mind. In some cases the identities are complete, each with its own behavior, tone of voice and physical gestures. In other cases, only a few characteristics are distinct, because the identities are only partially independent.

The disorder was made famous in novels and movies, such as —Sybill and —The Three Faces of EVELL. In Dissociative Identity Disorder, each alter is understood to be a consistent and enduring pattern of perceiving, relating to and thinking about the environment and the self.

**Characteristics of Dissociative Identity Disorder:** According to DSM-IV the major characteristics of this disorder are as follows:

- i) Amnesia is the most important characteristic feature of this disorder.
- ii) The identity of this disorder is fragmented.
- iii) Many personalities live inside one body. These can be anywhere from 3 to 4 to 100.
- iv) Certain important aspects of person's identity are dissociated.

A person who comes for treatment with a DID is called as a host personality. The host personality tends to hold many different identities together. The transition from one personality to another is called as a —switch. During a switch physical transformation may occur. Posture, facial expressions, pattern of facial wrinkling and even physical disabilities may occur. One of the most important debatable issue is whether the DID can be faked or whether it is real. Some important points with respect to this disorder are as follows:

- Individuals with DID are very suggestible and the alternative personalities that these individuals manifest are actually created as a reaction to leading questions suggested by therapists during psychotherapy or in a state of hypnosis.
- Some investigators have studied the ability of individuals to fake dissociative experiences. According to them it is possible to stimulate dissociative disorder. Various experiments conducted by Spanos et al (1994) have suggested that the symptoms of DID

could be faked. They found that in one experiment 80 percent of the individuals could successfully fake an alternative personality.

- Objective tests suggest that many people with fragmented identities are not consciously and voluntarily simulating
- DID is more common among females. The ratio of females to males is as high as 9 is to 1.
- The onset of this disorder is always in childhood, often as young as 4 years of age, although it is usually identified approximately at the age of 7 years.
- The prevalence rate of this disorder has been found to be between 3% to 6 %.

It has also been found that large percentage of DID patients have simultaneous psychological disorders that may include substance abuse, depression, somatisation disorder, borderline personality disorder, panic attacks and eating disorders.

- It has also been noted that there is a high degree of comorbidity of DID with other disorders. This high rate of comorbidity may reflect the fact that certain disorders, such as Borderline personality disorder share many features of DID.
- DID is often misdiagnosed as a psychotic disorder.
- DID occur in a variety of cultures across the world.
- People with DID also experiences a form of amnesia, in which they have gaps in their memory about some aspects of their personal history.

Richard Kluft (2005) has done considerable research in this area. Putnam et al (1986) have noted that, in the 50 years prior to 1970s, only a handful of cases had been reported, but since 1970s,

the number of reports increased astronomically, in to thousands. In fact, more cases of this disorder were reported during one 05 – year period in the 1980s than had been documented in the preceding two centuries.

**Causes of Dissociative Identity Disorder (DID):** Some important causes of DID are as follows:

- i. ***Childhood Traumatic Events:*** Many surveys have reported that DID is a result of traumatic life events. Putnam et al (1986) examined 100 cases and found that 97 % of the patients had experienced significant trauma, usually sexual or physical abuse and 68 % had reported incest. Similarly, Ross et al (1990) had reported that, of the 97 % of the cases, 95 percent reported physical or sexual abuse. Often the abuse is bizarre and sadistic. Traumatised individuals fail to develop an integrated and continuous sense of self
- ii. ***Lack of Social Support:*** It has also been found that a lack of social support during or after the abuse also seems implicated. A recent study of 428 adolescent twins has demonstrated that in 33% to 50% of the cases dissociative disorder could be attributed to chaotic, nonsupportive family environment.

***Sociocognitive Model of DID:*** This model was presented by Lilienfeld et al (1999). According to this model, clients enact the roles that they feel (consciously or unconsciously) are demanded by the situation. Social attention to the condition of DID, along with unintentional prompting by therapist, can lead to the development of this disorder in vulnerable individuals. According to Sociocognitive Model, these individuals may in fact have suffered abuse as children, but many other factors, socially determined, operate to create the dissociative symptoms in adulthood

- iv. ***Subtype of Post Traumatic Stress Disorder:*** DID is very similar in etiology to Post Traumatic Stress Disorder. Both conditions feature strong emotional reactions to experiencing a severe trauma. There are some researchers who are of the opinion that DID is an extreme subtype of Post Traumatic Stress Disorder, with a much greater

emphasis on the process of dissociation than on symptoms of anxiety, although both are present in each disorder.

- v. **Biological Contributions:** Some researchers have implicated biological contributions in the development of DID. It has been reported that individuals with certain neurological disorders, particularly seizure disorders, experience many dissociative symptoms. Devinsky et al (1989) reported that approximately 6 % of the patients with temporal lobe epilepsy reported —out of body experiences.

Similarly, another groups of researchers (Schenk and Bear, 1981) have found that about 50 % of the patients with temporal lobe epilepsy displayed some kinds of dissociative symptoms.

**Treatment of Dissociative Disorder:** Some important points with respect to the treatment of this disorder are as follows:

- i. Generally individuals who experience dissociative amnesia or a fugue state usually get better on his or her own and remember what they have forgotten.
- ii. The therapy focuses on recalling what happened during the amnesia or fugue states, often with help of friends or family who know what happened, so patients can confront the information and integrate it into their conscious experience.
- iii. The treatment of DID is much more difficult as compared to other dissociative disorders. Not much controlled research has been done on the effects of treatment, though there are many documented successes of attempts to reintegrate identities through long-term psychotherapy.
- iv. The strategies that therapist use today in treating DID are based on accumulated clinical wisdom as well as procedures that have been successful with posttraumatic stress disorder.

The major goal in treating DID is to identify cues or triggers that provoke memories of trauma and/or dissociation and to neutralize them. Most important in the treatment process is that the patient is taught to confront and relieve the early trauma and gain control over the horrible events, at least as they recur in the patient's mind

vi. In the treatment of DID hypnosis is often used to gain access to unconscious memories and bring various alters into awareness.

vii. Treatment of dissociative disorders involves helping the patient re-experience the traumatic events in a controlled therapeutic manner in order to develop better coping skills. In the case of dissociative identity disorder, therapy is often long term, and may include antidepressant drugs. Particularly essential with this disorder is a sense of trust between therapist and patient.

viii. Some clinicians have used cognitive-behavioural techniques in the treatment of DID instead of or in addition to hypnotherapy in an effort to change the client's dysfunctional attitudes. These attitudes arise from the client's history of abuse and includes the following core beliefs:

• |  
• |  
• |  
That it is wrong to show anger or defiance That one cannot handle painful memories

That one unconsciously hates the parents or experiences conflicting attitudes towards one or both the parents

That one must be punished That one cannot be trusted, etc.

According to Ross (1997) these core beliefs need to be changed. Kluff (1989) has used cognitive-behavioural techniques to bolster an individual's sense of self-efficacy through a process called temporizing, in which the client controls the way that the alters make their

appearance. This may be accomplished through hypnosis in an effort to help the client develop coping skills that can be used when dealing with stress.

### **Dissociative Identity Disorder and the Legal System:**

Forensic psychologists and other legal experts have been concerned with the legal aspects of DID. Legal Defendants have used this diagnostic category as a defense for their offences. Forensic psychologists and other members of the judicial system are faced with the difficult task of differentiating a true dissociative disorder from instances of malingering. Kenneth Bianchi, a serial murderer also known as the Hillside Strangler, faked multiple personality disorder defense. Individuals who seek to explain their crimes as products of alter personalities typically invoke an insanity defense or claim that they are not competent to stand trial (Slovenko, 1993). Accused undertake the defense that they have committed the crime under the control of an alter personality. They may further claim that the offense was committed in a state of dissociation and that they have no recall of what happened.

**Other Dissociative Disorders:** Many other dissociative disorders have also received considerable research attention and have come to the attention of the clinicians in their routine practice. Some important dissociative disorders that we will briefly discuss are as follows:

**a. Dissociative Amnesia:** Dissociative Amnesia was earlier called as psychogenic amnesia. In this disorder an individual is unable to remember important personal details and experiences usually associated with traumatic or very stressful events. This memory loss is not attributable to brain dysfunction, brain disorder or drugs. In this disorder an individual forgets his personal information in totality or is unable to remember some specific personal details. Dissociative Amnesia is common during the time of war or similar stressful events. It should be remembered that in most cases of Dissociative Amnesia, the forgetting is very selective for traumatic events or memories rather than generalized. Dissociative Amnesia is found to be common during war. There are four forms of dissociative amnesia, each associated with the nature of a person's memory loss. The four forms of dissociative amnesia are as follows:

- i. **Generalized Amnesia:** In this type of amnesia an individual is unable to remember personal information, including one's identity. The duration of this disorder may range from being a life long or may last for about 6 months or a year.
- ii. **Localized or Selective Amnesia:** In this type of amnesia there is a failure to recall specific events. These specific events, which are difficult to remember, are related to specific period of time. This amnesia is more common as compared to generalized amnesia.
- iii. **Selective Amnesia:** The individual fails to recall some, but not all details of events that have occurred during a given period of time. For example, the survivor of fire may remember the ambulance ride to the hospital, but not having been rescued from the burning house.

**Continuous Amnesia:** It involves a failure to recall events from a particular date up to and including the present time. For example a soldier may remember his childhood and youth until the time he entered the armed services, but he may have forgotten everything that took place after his first tour of combat duty.

Dissociative Amnesia is very difficult for clinicians to diagnose, because there are so many possible causes of memory loss. Amnesia can also result from physical dysfunction due to brain injury, epilepsy, substance abuse, etc. Some individuals also fake symptoms of dissociative amnesia to gain certain benefits or advantages. For example, a man who has committed a serious crime may claim that he remembers nothing of the incident or even who is.

**b. Dissociative Fugue:** It was formerly called as psychogenic fugue. The term Fugue means flight and this disorder is very much similar to amnesia. In this disorder individuals take off from one place and move to another place without their conscious awareness and may be further confused, on gaining awareness, as to how they arrived at this new place. In this disorder a

person is confused about personal identity suddenly and unexpectedly travels to another place. People in a fugue state are unable to recall their history or identity and a few may even assume a new identity. A fugue is rare and usually passes quickly. The disorder is more likely to occur at certain times, such as during a war or following a natural disaster. Personal crises or extreme stress, such as financial problems the desire to escape punishment or the experience of a trauma can also precipitate fugue states. Some other important features of this disorder are as follows:

- This disorder usually occurs in adulthood and never before adolescence. It rarely occurs after the person has crossed the age of 50.
- Dissociative Fugue is such a rare disorder that virtually no controlled research has been carried out on it.
- Fugue state end rather abruptly and the individual returns home recalling most if not all of what happened. In this disorder, the disintegrated experience is more than memory loss, involving atleast some disintegration of identity if not the complete adaptation of a new role.

**c. Depersonalization Disorder:** It is a dissociative disorder, usually occurring in adolescence, in which individuals lose their sense of self and feel unreal or displaced to a different location. Depersonalization involves a sense of thing or experiences as being —unreal and a feeling of estrangement from oneself or one’s surrounding, both feelings have an unpleasant quality and are experienced as a distinct change from one’s usual mode of functioning.

Individuals with this disorder feel that they are, all of a sudden different, for example, that they are other people or that their bodies have drastically changed and hence, become very much different.

Individuals with this disorder have an out-of-body experience in which they feel that they are, for time, floating above their physical bodies and observing what is going on below.

The phenomenon of depersonalization includes alterations of mind-body perception, ranging from detachment from one's experiences to the feeling that one has stepped out of one's body.

Depersonalisation experiences also occur in normal people when they are placed under great stress or when they use mind-altering drugs, such as marijuana or LSD. In depersonalization disorder, however, distortions of mind-body perceptions happen repeatedly without provocation by drugs. Periods of extreme stress, such as the time immediately following an accident can also precipitate an episode of Depersonalisation in a vulnerable individual

This disorder is often precipitated by acute stress resulting from an infectious illness, an accident, or some other traumatic event. Individuals who experience depersonalized state are usually able to function entirely normally between episodes.

This disorder is episodic by nature and lasts for few minutes or hours. This is the most frequent disorder of dissociative type, so it is thought that it must be mildest form of dissociation and must be more easily curable. It is assumed that depersonalization must be an attempt to escape from a stressful situation. However, the data about the disorder is not very clear. Some important features of this disorder are as follows:

- Depersonalisation is a psychological mechanism whereby one —dissociates from reality. Depersonalisation is often a part of a serious set of conditions where reality experience and even one's identity seem to disintegrate.
- This is the most frequent disorder of dissociative type, so it is thought that it must be the mildest form of dissociation and must be more easily curable.
- Most frequent disorder found among normal individuals.
- It involves feelings that are extremely unpleasant and result in anxiety and feeling of lack of control.
- In this disorder an individual feels that he is out of his body and the body is distorted. Sometimes, people also report that they were dead and floating above the body.
- This disorder is episodic by nature and lasts for few minutes or hours.

## **Theories and Treatment of Dissociative Amnesia, Dissociative Fugue and Depersonalisation Disorder:**

Most experts agree that dissociative disorders are the end product of intensely traumatic experiences during childhood, especially those involving abuse or other forms of emotional maltreatment. Other forms of traumatic experiences, which can be transient or long lasting may also lead to dissociative disorders. Current views with regard to causation of dissociative disorder is largely based on psychological perspectives. Our knowledge of biological factors involved in causation of these conditions is highly limited.

## **Somatoform Disorders, Psychological Factors Affecting Medical Conditions And Dissociative Disorders: The Biopsychosocial Perspective**

Historically these disorders were regarded as neurosis rather than psychosis. People with these disorders have experienced conflict or trauma during their lives and circumstances have created strong emotional reactions that they could not integrate in to their memory, personality and self-concept. The symptoms seen in somatisation disorder and dissociative states represent not a loss of contact with reality but a translation of various emotions in to terms that are less painful to acknowledge than is the original conflict or trauma.

Stressful events in many individuals trigger maladaptive responses in physical functioning, ranging from variety of physical conditions to sleep dysfunctions and various somatic complaints which are often vague. Currently the most prevalent view is that stress related factors and not repressed sexuality is central to understanding somatoform disorders. Besides stress, learning seems to play a strong role, especially in cases where individuals have developed secondary gains from their symptoms.

With regard to dissociative disorders, researchers believe that, actual, rather than imagined trauma is the source of such symptoms as amnesia, fugue and multiple identities.

Cognitive behavioural therapists have also offered their perspective on this group of disorders. According to them low feelings of self-efficacy, lack of assertiveness and faulty ideas about the self can all be contributing factors to somatoform and dissociative disorders. For example believing that one must be sick to be worthy of attention is a dysfunctional attitude that underlie

the development of somatoform disorders. Similarly faulty beliefs about the self and the role of the self in past experiences of trauma seem to be important cognitive factors that may contribute to an individual's vulnerability to developing these maladaptive thoughts or susceptibility to trauma.

## **UNIT V: DISORDERS DUE TO PSYCHOLOGICAL SUBSTANCE USE**

Under certain conditions, the use of substances that affect mood and behavior is normal, at least as gauged by statistical frequency and social standards. It is normal to start the day with caffeine in the form of coffee or tea, to take wine or coffee with meals, to meet friends for a drink after work, and to end the day with a nightcap. Many of us take prescription drugs that calm us down or ease our pain. Some psychoactive substances, such as cocaine, marijuana, and heroin, are illegal and are used illicitly. Others, such as anti-anxiety drugs (such as Valium and Xanax) and amphetamines (such as Ritalin), are available by prescription for legitimate medical uses. Still others, such as tobacco (which contains nicotine, a mild stimulant) and alcohol (a depressant), are available without prescription, or over-the-counter. Ironically, the most widely and easily accessible substances—tobacco and alcohol—cause more deaths through sickness and accidents than all illicit drugs combined.

The classification of substance-related disorders in the *DSM* system is not based on whether a drug is legal or not, but rather on how drug use impairs the person's physiological and

psychological functioning. The *DSM-IV* classifies substance-related disorders into two major categories: substance use disorders and substance-induced disorders.

**Substance-induced disorders** are disorders induced by using psychoactive substances, such as intoxication, withdrawal syndromes, mood disorders, delirium, dementia, amnesia, psychotic disorders, anxiety disorders, sexual dysfunctions, and sleep disorders. Different substances have different effects, so some of these disorders may be induced by one, a few, or nearly all substances. Let us consider the example of intoxication.

Substance **intoxication** refers to a state of drunkenness or being “high.” This effect largely reflects the chemical actions of the psychoactive substances. The particular features of intoxication depend on which drug is ingested, the dose, the user’s biological reactivity, and—to some degree—the user’s expectations. Signs of intoxication often include confusion, belligerence, impaired judgment, inattention, and impaired motor and spatial skills. Extreme intoxication from use of alcohol, cocaine, opioids, (narcotics) and PCP can even result in death (yes, you can die from alcohol overdoses), either because of the substance’s biochemical effects or because of behavior patterns— such as suicide—that are connected with psychological pain or impaired judgment brought on by use of the drug.

**Substance use disorders** are patterns of maladaptive use of psychoactive substances.

### **Substance Abuse and Dependence**

Where does substance use end and abuse begin? According to the *DSM*, **substance abuse** is a pattern of recurrent use that leads to damaging consequences. Damaging consequences may involve failure to meet one’s major role responsibilities (e.g., as student, worker, or parent), putting oneself in situations where substance use is physically dangerous (e.g., mixing driving and substance use), encountering repeated problems with the law arising from substance use (e.g., multiple arrests for substance-related behavior), or having recurring social or interpersonal problems because of substance use (e.g., repeatedly getting into fights when drinking).

When people repeatedly miss school or work because they are drunk or “sleeping it off,” their behavior may fit the definition of substance abuse. A single incident of excessive drinking at a friend’s wedding would not qualify. Nor would regular consumption of low to moderate amounts of alcohol be considered abusive so long as it is not connected with any impairment in functioning. Neither the amount nor the type of drug ingested, nor whether the drug is illicit, is the key to defining substance abuse according to the *DSM*. Rather, the determining feature of substance abuse is whether a pattern of drug-using behavior becomes repeatedly linked to damaging consequences.

Substance abuse may continue for a long period of time or progress to **substance dependence**, a more severe disorder associated with physiological signs of dependence (tolerance or withdrawal syndrome) *or* compulsive use of a substance. People who become compulsive users lack control over their drug use. They may be aware of how their drug use is disrupting their lives or damaging their health, but feel helpless or powerless to stop using drugs, even though they may want to. By the time they become dependent on a given drug, they’ve given over much of their lives to obtaining and using it. The cocaine user whose words opened this chapter would certainly fit this definition. The diagnostic features of substance dependence are listed below.

### **Diagnostic Features of Substance Dependence**

Substance dependence is defined as a maladaptive pattern of use that results in significant impairment or distress, as shown by the following features occurring within the same year:

1. Tolerance for the substance, as shown by either
  - a. the need for increased amounts of the substance to achieve the desired effect or intoxication, or
  - b. marked reduction in the effects of continuing to ingest the same amounts.
2. Withdrawal symptoms, as shown by either
  - a. the withdrawal syndrome that is considered characteristic for the substance, or
  - b. the taking of the same substance (or a closely related substance, as when methadone is substituted for heroin) to relieve or to prevent withdrawal symptoms.

3. Taking larger amounts of the substance or for longer periods of time than the individual intended (e.g., person had desired to take only one drink, but after taking the first, continues drinking until severely intoxicated).
4. Persistent desire to cut down or control intake of substance or lack of success in trying to exercise self-control.
5. Spending a good deal of time in activities directed toward obtaining the substance (e.g., visiting several physicians to obtain prescriptions or engaging in theft), in actually ingesting the substance, or in recovering from its use. In severe cases, the individual's daily life revolves around substance use.
6. The individual has reduced or given up important social, occupational, or recreational activities due to substance use (e.g., person withdraws from family events in order to indulge in drug use).
7. Substance use is continued despite evidence of persistent or recurrent psychological or physical problems either caused or exacerbated by its use (e.g., repeated arrests for driving while intoxicated).

*Note:* Not all of these features need be present for a diagnosis to be made.

*Source:* Adapted from the *DSM-IV-TR* (APA, 2000).

Repeated use of a substance may alter the body's physiological reactions, leading to the development of tolerance or a physical withdrawal syndrome. **Tolerance** is a state of physical habituation to a drug, resulting from frequent use, such that higher doses are needed to achieve the same effect. A **withdrawal syndrome** (also called an *abstinence syndrome*) is a cluster of symptoms that occur when a dependent person abruptly stops using a particular substance following heavy, prolonged use.

People who experience a withdrawal syndrome often return to using the substance to relieve the discomfort associated with withdrawal, which thus serves to maintain the addictive pattern. Withdrawal symptoms vary with the particular type of drug. With alcohol dependence, typical withdrawal symptoms include dryness in the mouth, nausea or vomiting, weakness, increased heart rate, anxiety, depression, headaches, insomnia, elevated blood pressure, and fleeting hallucinations. In some cases of chronic alcoholism, withdrawal produces a state of *delirium tremens*, or DTs. DTs are usually limited to chronic, heavy users of alcohol who dramatically

lower their intake of alcohol after many years of heavy drinking. DTs involve intense autonomic hyperactivity (profuse sweating and tachycardia) and *delirium*—a state of mental confusion characterized by incoherent speech, disorientation, and extreme restlessness. Terrifying hallucinations—frequently of creepy, crawling animals—may also be present. Substances that may lead to withdrawal syndromes include—in addition to alcohol—opioids, cocaine, amphetamines, sedatives and barbiturates, nicotine, and antianxiety agents (minor tranquilizers). Marijuana and hallucinogens such as LSD are not recognized as producing a withdrawal syndrome, because abrupt withdrawal from these substances does not produce clinically significant withdrawal effects (APA, 2000).

Substance dependence is often, but not always, associated with the development of physiological dependence. It sometimes involves a pattern of compulsive use without physiological or chemical dependence. For example, people may become compulsive users of marijuana, especially when they rely on the drug to help them cope with the stresses of daily life. Yet they may not require larger amounts of the substance to get “high” or experience distressing withdrawal symptoms when they cease using it. In most cases, however, substance dependence and physiological features of dependence occur together. Despite the fact that the *DSM* considers substance abuse and dependence to be distinct diagnostic categories, the borderline between the two is not always clear.

## **DRUGS OF ABUSE**

Drugs of abuse are generally classified within three major groupings: (a) depressants, such as alcohol and opioids; (b) stimulants, such as amphetamines and cocaine; and (c) hallucinogens.

### **Depressants**

A **depressant** is a drug that slows down or curbs the activity of the central nervous system. It reduces feelings of tension and anxiety, slows movement, and impairs cognitive processes. In high doses, depressants can arrest vital functions and cause death.

The most widely used depressant, alcohol, can cause death when taken in large amounts because of its depressant effects on breathing. Other effects are specific to the particular kind of depressant. For example, some depressants, such as heroin, produce a “rush” of pleasure. Here let us consider several major types of depressants.

## Alcohol

You might not think of alcohol as a drug, perhaps because it is so common, or perhaps because it is ingested by drinking rather than by smoking or injection. But alcoholic beverages—such as wine, beer, and hard liquor—contain a depressant drug called *ethyl alcohol* (or *ethanol*). The concentration of the drug varies with the type of beverage (wine and beer have less pure alcohol per ounce than distilled spirits such as rye, gin, or vodka). Alcohol is classified as a depressant because it has biochemical effects similar to those of a class of antianxiety agents or minor tranquilizers, the *benzodiazepines*, which includes the well-known drugs *diazepam* (Valium) and *chlordiazepoxide*

(Librium). We can think of alcohol as an over-the-counter tranquilizer. Many lay and professional people use the terms **alcoholism** and alcohol dependence interchangeably, as we will. We use either term to refer to a pattern of impaired control over the use of alcohol in someone who has become physiologically dependent on the drug.

The most widely held view of alcoholism is the disease model, the belief that alcoholism is a medical illness or disease. From this perspective, once a person with alcoholism takes a drink, the biochemical effects of the drug on the brain create an irresistible physical craving for more. The disease model holds that alcoholism is a chronic, permanent condition. The peer-support group Alcoholics Anonymous (AA) subscribes to this view, which is expressed in their slogan, “Once an alcoholic, always an alcoholic.” AA views people suffering from alcoholism as either drinking or “recovering,” never “cured.”

The personal and social costs of alcoholism exceed those of all illicit drugs combined.

Alcohol abuse is connected with lower productivity, loss of jobs, and downward movement in socioeconomic status. Alcohol plays a role in many violent crimes, including assaults and homicides, and innumerable rapes and sexual attacks annually. The great majority of people with alcoholism are quite ordinary—your neighbors, coworkers, friends, and members of your own family. They are found in all walks of life and every social and economic class. Many have families, hold good jobs, and live fairly comfortably. Yet alcoholism can have just as devastating an effect on the well-to-do as on the indigent, leading to wrecked careers and marriages, to motor vehicle and other accidents, and to severe, life-threatening physical disorders, as well as exacting

an enormous emotional toll. Alcoholism is also linked to higher levels of domestic violence and greater risk of divorce

No single drinking pattern is exclusively associated with alcoholism. Some people with alcoholism drink heavily every day; others binge only on weekends. Others can abstain for lengthy periods of time, but periodically “go off the wagon” and engage in episodes of binge drinking that last for weeks or months. Alcohol, not cocaine or other drugs, is the drug of choice among young people today and the leading drug of abuse. Drinking has become so integrated into college life that it is essentially normative, as much a part of the college experience as attending a weekend football or basketball game. Yet drinking often begins before young people reach college age.

Drinking among college students tends to be limited to weekends and to be heavier early in the semester when academic requirements are relatively light. As a group, young adults in the 18- to 24-year age range show the highest rates of alcohol use and the highest proportions of problem drinking. College students drink more than their peers who do not attend college.

***Risk Factors for Alcoholism*** A number of factors place people at increased risk for developing alcoholism and alcohol-related problems. These include the following:

- 1. Gender.** Men are more than twice as likely as women to develop alcoholism. One possible reason for this gender difference is socio-cultural; perhaps tighter cultural constraints are placed on women. Yet it may also be that alcohol hits women harder, and not only because women usually weigh less than men. Alcohol seems to “go to women’s heads” more rapidly than men’s. This is apparently because women have less of an enzyme that metabolizes alcohol in the stomach than men do. Ounce for ounce, women absorb more alcohol into their bloodstreams than do men. As a result, they are likely to become inebriated on less alcohol than men. Consequently, women’s bodies may put the brakes on excessive drinking more quickly than men’s.

- 2. Age.** The great majority of cases of alcohol dependence develop in young adulthood, typically between the ages of 20 and 40. Although alcohol use disorders tend to develop somewhat later in women than in men, women who develop these problems experience similar health, social, and occupational problems by middle age as their male counterparts.

- 3. Antisocial personality disorder.** Antisocial behavior in adolescence or adulthood increases the risk of later alcoholism. On the other hand, many people with alcoholism showed no antisocial

tendencies in adolescence, and many antisocial adolescents do not abuse alcohol or other drugs as adults.

**4. *Family history.*** The best predictor of problem drinking in adulthood appears to be a family history of alcohol abuse. Family members who drink may act as models (“set a poor example”). Moreover, the biological relatives of people with alcohol dependence may also inherit a predisposition that makes them more likely to develop problems with alcohol.

**5. *Sociodemographic factors.*** Alcohol dependence is generally more common among people of lower income and educational levels, as well as among people living alone.

***Psychological Effects of Alcohol*** The effects of alcohol or other drugs vary from person to person. By and large they reflect the interaction of (a) the physiological effects of the substances, and (b) our interpretations of those effects. What do most people expect from alcohol? People frequently hold stereotypical expectations that alcohol will reduce tension, enhance pleasurable experiences, wash away worries, and enhance social skills. But what *does* alcohol actually do? At a physiological level, alcohol appears to work like the benzodiazepines (a family of antianxiety drugs), by heightening activity of the neurotransmitter GABA. Because GABA is an inhibitory neurotransmitter (it tones down nervous system activity), increasing GABA activity produces feelings of relaxation. As people drink, their senses become clouded, and balance and coordination suffer. Still higher doses act on the parts of the brain that regulate involuntary vital functions, such as heart rate, respiration rate, and body temperature. People may do many things when drinking that they would not do when sober, in part because of expectations concerning the drug, in part because of the drug effects on the brain. For example, they may become more flirtatious or sexually aggressive or say or do things they later regret. Their behavior may reflect their expectation that alcohol has liberating effects and provides an external excuse for questionable behavior. Later, they can claim, “It was the alcohol, not me.” The drug may also impair the brain’s ability to curb impulsive, risk-taking, or violent behavior, perhaps by interfering with information-processing functions. Investigators find strong links between alcohol use and violent behavior, including domestic violence and sexual assaults.

Although alcohol makes people feel more relaxed and self-confident, it also impairs judgment, which can lead them to make choices they would ordinarily reject, such as engaging in risky sex.

Chronic alcohol abuse can impair cognitive abilities, such as memory, problem solving, and attention.

One of the lures of alcohol is that it induces short-term feelings of euphoria and elation that can drown self-doubts and self-criticism. Alcohol also makes people less capable of perceiving the unfortunate consequences of their behavior. Alcohol use can dampen sexual arousal or excitement and impair sexual performance. As an intoxicant, alcohol also hampers coordination and motor ability.

***Physical Health and Alcohol*** Chronic, heavy alcohol use affects virtually every organ and body system, either directly or indirectly. Heavy alcohol use is linked to increased risk of many serious health concerns, including liver disease, increased risk of some forms of cancer, coronary heart disease, and neurological disorders. Two of the major forms of alcohol-related liver disease are *alcoholic hepatitis*, a serious and potentially life-threatening inflammation of the liver, and *cirrhosis of the liver*, a potentially fatal disease in which healthy liver cells are replaced with scar tissue.

Habitual drinkers tend to be malnourished, which can put them at risk of complications arising from nutritional deficiencies. Chronic drinking is thus associated with such nutritionally linked disorders as cirrhosis of the liver (linked to protein deficiency) and *alcohol-induced persisting amnesic disorder* (connected with vitamin B deficiency). This condition, also known as *Korsakoff's syndrome*, is characterized by glaring confusion, disorientation, and memory loss for recent events

Mothers who drink during pregnancy place their fetuses at risk for infant mortality, birth defects, central nervous system dysfunctions, and later academic problems. Children whose mothers drink during pregnancy may develop *fetal alcohol syndrome* (FAS), a syndrome characterized by facial features such as a flattened nose, widely spaced eyes, and underdeveloped upper jaw, as well as mental retardation and social skills deficits. Although the risk is greater among women who drink heavily during pregnancy, FAS has been found among children of mothers who drank as little as a drink and a half per week

**Barbiturates** About 1% of adult Americans develop a substance abuse or dependence disorder involving the use of barbiturates, sleep medication (hypnotics), or anti-anxiety agents at some

point in their lives. **Barbiturates** such as *amobarbital*, *pentobarbital*, *phenobarbital*, and *secobarbital* are depressants, or *sedatives*. These drugs have several medical uses, including easing anxiety and tension, dulling pain, and treating epilepsy and high blood pressure. Barbiturate use quickly leads to psychological dependence and physiological dependence in the form of both tolerance and development of a withdrawal syndrome.

Barbiturates are also popular street drugs because they are relaxing and produce a mild state of euphoria, or “high.” High doses of barbiturates, like alcohol, produce drowsiness, slurred speech, motor impairment, irritability, and poor judgment—a particularly deadly combination of effects when their use is combined with operation of a motor vehicle. The effects of barbiturates last from 3 to 6 hours.

Because of synergistic effects, a mixture of barbiturates and alcohol is about 4 times as powerful as either drug used by itself. Even such widely used antianxiety drugs as Valium and Librium, which have a wide margin of safety when used alone, can be dangerous and lead to overdoses when combined with alcohol.

Physiologically dependent people need to be withdrawn carefully, and only under medical supervision, from sedatives, barbiturates, and anti-anxiety agents. Abrupt withdrawal can produce states of delirium that may involve visual, tactile, or auditory hallucinations and disturbances in thinking processes and consciousness. The longer the period of use and the higher the doses used, the greater the risk of severe withdrawal effects. Epileptic (grand mal) seizures and even death may occur if the individual undergoes untreated, abrupt withdrawal.

**Opioids** Opioids are classified as **narcotics**—addictive drugs that have pain-relieving and sleep-inducing properties. Opioids include both naturally occurring opiates (morphine, heroin, codeine) derived from the juice of the poppy plant and synthetic drugs that have opiate-like effects. The ancient Sumerians named the poppy plant *opium*, meaning “plant of joy.” Opioids produce a *rush*, or intense feelings of pleasure, which is the primary reason for their popularity as street drugs. They also dull awareness of one’s personal problems, which is attractive to people seeking a mental escape from stress. Their pleasurable effects derive from their ability to directly stimulate the brain’s pleasure circuits—the same brain networks responsible for feelings of sexual pleasure or pleasure from eating a satisfying meal.

The major medical application of opioids—natural or synthetic—is the relief of pain, or *analgesia*. Medical use of opioids, however, is carefully regulated because overdoses can lead to coma and even death. Street use of opioids is associated with many fatal overdoses and accidents. Once dependence sets in, it usually becomes chronic, relieved by brief periods of abstinence. Adding to the problem is that prescription opioids too, used medically for pain relief, can become drugs of abuse when they are used illicitly as street drugs.

Two discoveries made in the 1970s show that the brain produces chemicals of its own that have opiatelike effects. One was that neurons in the brain have receptor sites that opiates fit like a key in a lock. The second was that the human body produces its own opiatelike substances that dock at the same receptor sites as opiates do. These natural substances, or **endorphins**, play important roles in regulating natural states of pleasure and pain. Opioids mimic the actions of endorphins by docking at receptor sites intended for them, which in turn stimulates the brain centers that produce pleasurable sensations.

The withdrawal syndrome associated with opioids can be severe. It begins within 4 to 6 hours of the last dose. Flu-like symptoms are accompanied by anxiety, feelings of restlessness, irritability, and cravings for the drug. Within a few days, symptoms progress to rapid pulse, high blood pressure, cramps, tremors, hot and cold flashes, fever, vomiting, insomnia, and diarrhea, among others. Although these symptoms can be uncomfortable, they are usually not devastating, especially when other drugs are prescribed to relieve them. Moreover, unlike withdrawal from barbiturates, the withdrawal syndrome rarely results in death.

**Morphine**—which receives its name from Morpheus, the Greek god of dreams—was introduced at about the time of the U.S. Civil War. Morphine, a powerful opium derivative, was used liberally to deaden pain from wounds. Physiological dependence on morphine became known as the “soldier’s disease.” There was little stigma attached to dependence until morphine became a restricted substance.

**Heroin**, the most widely used opiate, is a powerful depressant that can create a euphoric rush. Users of heroin claim that it is so pleasurable it can eradicate any thought of food or sex.

Heroin was developed in 1875 during a search for a drug that would relieve pain as effectively as morphine, but without causing addiction. Chemist Heinrich Dreser transformed morphine into a drug believed to have “heroic” effects in relieving pain without addiction, which is why it was called *heroin*. Unfortunately, heroin does lead to physiological dependence.

Heroin is usually injected either directly beneath the skin (skin popping) or into a vein (mainlining). The positive effects are immediate. There is a powerful rush that lasts from 5 to 15 minutes and a state of satisfaction, euphoria, and well-being that lasts from 3 to 5 hours. In this state, all positive drives seem satisfied. All negative feelings of guilt, tension, and anxiety disappear. With prolonged usage, addiction can develop. Many physiologically dependent people support their habits through dealing (selling heroin), prostitution, or selling stolen goods. Heroin is a depressant, however, and its chemical effects do not directly stimulate criminal or aggressive behavior.

### **Stimulants**

**Stimulants** are psychoactive substances that increase the activity of the central nervous system, which enhances states of alertness and can produce feelings of pleasure or even euphoric highs. The effects vary with the particular drug.

**Amphetamines** The **amphetamines** are a class of synthetic stimulants. Street names for stimulants include speed, uppers, bennies (for *amphetamine sulfate*; trade name Benzedrine), “meth” (for *methamphetamine*; trade name Methedrine), and dexies (for *dextroamphetamine*; trade name Dexedrine).

Amphetamines are used in high doses for their euphoric rush. They are often taken in pill form or smoked in a relatively pure form called “ice” or “crystal meth.” The most potent form of amphetamine, liquid methamphetamine, is injected directly into the veins and produces an intense and immediate rush. Some users inject methamphetamine for days on end to maintain an extended high. Eventually such highs come to an end. People who have been on extended highs sometimes “crash” and fall into a deep sleep or depression. Some people commit suicide on the way down. High doses can cause restlessness, irritability, hallucinations, paranoid delusions, loss of appetite, and insomnia.

Physiological dependence can develop from using amphetamines, leading to an abstinence syndrome characterized by depression and fatigue, as well as by unpleasant, vivid dreams, insomnia or hypersomnia (excessive sleeping), increased appetite, and either a slowing down of motor behavior or agitation. Psychological dependence is seen most often in people who use amphetamines as a way of coping with stress or depression.

Methamphetamine abuse can cause brain damage, producing deficits in learning and memory in addition to other effects. Violent behavior may also occur, especially when the drug is smoked or injected intravenously. The hallucinations and delusions of **amphetamine psychosis** mimic those of paranoid schizophrenia, which has encouraged researchers to study the chemical changes induced by amphetamines as possible clues to the underlying causes of schizophrenia.

**Cocaine** It might surprise you to learn that the original formula for Coca-Cola contained an extract of **cocaine**. In 1906, however, the company withdrew cocaine from its secret formula. The drink was originally described as a “brain tonic and intellectual beverage,” in part because of its cocaine content. Cocaine is a natural stimulant extracted from the leaves of the coca plant—the plant from which the soft drink obtained its name. Coca-Cola is still flavored with an extract from the coca plant, one that is not known to be psychoactive.

It was long believed that cocaine was not physically addicting. However, the drug produces a tolerance effect and an identifiable withdrawal syndrome, which is characterized by depressed mood and disturbances in sleep and appetite. Intense cravings for the drug and loss of ability to experience pleasure may also be present. Withdrawal symptoms are usually brief in duration and may involve a “crash,” or period of intense depression and exhaustion, following abrupt withdrawal.

Cocaine is usually snorted in powder form or smoked in the form of **crack**, a hardened form of cocaine that may be more than 75% pure. Crack “rocks”—so called because they look like small white pebbles—are available in small ready-to-smoke amounts and considered to be the most habit-forming street drug available. Crack produces a prompt and potent rush that wears off in a few minutes. The rush from snorting powdered cocaine is milder and takes a while to develop, but it tends to linger longer than the rush of crack.

*Freebasing* also intensifies the effects of cocaine. In freebasing, cocaine in powder form is heated with ether, freeing the psychoactive chemical base of the drug, and then smoked. Ether, however, is highly flammable.

***Effects of Cocaine*** Like heroin, cocaine directly stimulates the brain's reward or pleasure circuits. It also produces a sudden rise in blood pressure and an accelerated heart rate that can cause potentially dangerous, even fatal, irregular heart rhythms. Overdoses can produce restlessness, insomnia, headaches, nausea, convulsions, tremors, hallucinations, delusions, and even sudden death due to respiratory or cardiovascular collapse. Regular snorting of cocaine can lead to serious nasal problems, including ulcers in the nostrils.

Repeated use and high-dose use of cocaine can lead to depression and anxiety. Depression may be severe enough to prompt suicidal behavior. Both initial and routine users report episodes of "crashing" (feelings of depression after a binge), although crashing is more common among long-term high-dose users. Psychotic behaviors, which can be induced by cocaine use as well as by use of amphetamines, tend to become more severe with continued use. Cocaine psychosis is usually preceded by a period of heightened suspiciousness, depressed mood, compulsive behavior, faultfinding, irritability, and increasing paranoia. The psychosis may also include intense visual and auditory hallucinations and delusions of persecution.

**Nicotine** Habitual smoking is not merely a bad habit: It is also a physical addiction to a stimulant drug, nicotine, found in tobacco products including cigarettes, cigars, and smokeless tobacco. Smoking doubles the risk of dying in midlife. The World Health Organization estimates that 1 billion people worldwide smoke and more than 3 million die each year from smoking-related causes. Although quitting smoking clearly has health benefits for women and men, it unfortunately does not reduce the risks to normal (nonsmoking) levels. The lesson is clear: If you don't smoke, don't start; if you do smoke, quit.

Nicotine is delivered to the body through the use of tobacco products. As a stimulant it increases alertness but can also give rise to cold, clammy skin, nausea and vomiting, dizziness and faintness, and diarrhea—all of which account for the discomforts of novice smokers. Nicotine also stimulates the release of epinephrine, a hormone that generates a rush of autonomic nervous system activity, including rapid heartbeat and release of stores of sugar into the blood. Nicotine quells the appetite and provides a psychological "kick." Nicotine also leads to the release of

endorphins, the opiate-like hormones produced in the brain. This may account for the pleasurable feelings associated with tobacco use.

Habitual use of nicotine leads to physiological dependence on the drug. Nicotine dependence is associated with both tolerance (intake rises to a level of a pack or two a day before leveling off) and a characteristic withdrawal syndrome. The withdrawal syndrome for nicotine includes such features as lack of energy, depressed mood, irritability, frustration, nervousness, impaired concentration, lightheadedness and dizziness, drowsiness, headaches, fatigue, irregular bowels, insomnia, cramps, lowered heart rate, heart palpitations, increased appetite, weight gain, sweating, tremors, and craving for cigarettes (APA, 2000). It is nicotine dependence, not cigarette smoking per se, that is classifiable as a mental disorder in the *DSM* system.

### Hallucinogens

**Hallucinogens**, also known as *psychedelics*, are a class of drugs that produce sensory distortions or hallucinations, including major alterations in color perception and hearing. Hallucinogens may also have additional effects, such as relaxation and euphoria or, in some cases, panic. Hallucinogens include lysergic acid diethylamide (LSD), psilocybin, and mescaline. Psychoactive substances that are similar in effect to psychedelic drugs are marijuana (*cannabis*) and *phencyclidine* (PCP). Mescaline is derived from the peyote cactus and has been used for centuries by Native Americans in the Southwest, Mexico, and Central America in religious ceremonies, as has psilocybin, which is derived from certain mushrooms. Although tolerance to hallucinogens may develop, we lack evidence of a consistent or clinically significant withdrawal syndrome associated with their use (APA, 2000). However, cravings following withdrawal may occur.

**LSD** LSD is the acronym for *lysergic acid diethylamide*, a synthetic hallucinogenic drug. In addition to the vivid parade of colors and visual distortions produced by LSD, users have claimed it “expands consciousness” and opens new worlds—as if they were looking into some reality beyond the usual reality. Sometimes they believe they have achieved great insights during the LSD “trip,” but when it wears off they usually cannot follow through or even summon up these discoveries.

The effects of LSD are unpredictable and depend on the amount taken as well as the user's expectations, personality, mood, and surroundings. The user's prior experiences with the drug may also play a role, as users who have learned to handle the effects of the drug through past experience may be better prepared than new users. Some users have unpleasant experiences with the drug, or "bad trips." Feelings of intense fear or panic may occur. Users may fear losing control or sanity. Some experience terrifying fears of death. Fatal accidents have sometimes occurred during LSD trips.

*Flashbacks*, typically involving a reexperiencing of some of the perceptual distortions of the "trip," may occur days, weeks, or even years afterward. Flashbacks tend to occur suddenly and often without warning. Perceptual distortions may involve geometric forms, flashes of color, intensified colors, afterimages, or appearances of halos around objects, among others (APA, 2000). They may stem from chemical changes in the brain caused by the prior use of the drug. Triggers for flashbacks include entry into darkened environments, drug use, anxiety or fatigue states, or stress. Psychological factors, such as underlying personality problems, may also explain why some users experience flashbacks. In some cases, a flashback may involve an imagined reenactment of the LSD experience.

**Phencyclidine (PCP)** *Phencyclidine*, or PCP—which is referred to as "angel dust" on the streets—was developed as an anesthetic in the 1950s but was discontinued as such when its hallucinatory side effects were discovered. A smokable form of PCP became popular as a street drug in the 1970s. However, its popularity has since waned, largely because of its unpredictable effects. The effects of PCP, like most drugs, are dose related. In addition to causing hallucinations, PCP accelerates the heart rate and blood pressure and causes sweating, flushing, and numbness. PCP is classified as a *deliriant*—a drug capable of producing states of delirium. It also has dissociating effects, causing users to feel as if there is some sort of invisible barrier between themselves and their environments. Dissociation can be experienced as pleasant, engrossing, or frightening, depending on the user's expectations, mood, setting, and so on. Overdoses can give rise to drowsiness and a blank stare, convulsions, and, now and then, coma; paranoia and aggressive behavior; and tragic accidents resulting from perceptual distortion or impaired judgment during states of intoxication.

**Marijuana** **Marijuana** is derived from the *Cannabis sativa* plant. Marijuana is generally classified as a hallucinogen because it can produce perceptual distortions or mild hallucinations, especially in high doses or when used by susceptible individuals. The psychoactive substance in marijuana is *delta-9-tetrahydrocannabinol*, or, thankfully, THC for short. THC is found in branches and leaves of the plant but is highly concentrated in the resin of the female plant. *Hashish*, or “hash,” also derived from the resin, is more potent than marijuana but has similar effects.

Use of marijuana exploded throughout the so-called swinging 1960s and the 1970s, but the drug then lost some (but not all) of its cachet. Still, marijuana remains our most widely used illegal drug, and abuse of marijuana is the most common of all the substance abuse disorders involving illicit drugs (Compton et al., 2004). That said, the prevalence of use and abuse of marijuana doesn't compare with that of alcohol.

Low doses of the drug can produce relaxing feelings similar to drinking alcohol. Some users report that at low doses the drug makes them feel more comfortable in social gatherings. Higher doses, however, often lead users to withdraw into themselves. Some users believe the drug increases their capacity for self-insight or creative thinking, although the insights achieved under its influence may not seem so insightful once the drug's effects have passed. People may turn to marijuana, as to other drugs, to help them cope with life problems or to help them function when they are under stress. Strongly intoxicated people perceive time as passing more slowly. A song of a few minutes may seem to last an hour. There is increased awareness of bodily sensations, such as heartbeat. Smokers also report that strong intoxication heightens sexual sensations. Visual hallucinations may occur.

Strong intoxication can cause smokers to become disoriented. If their moods are euphoric, disorientation may be construed as harmony with the universe. Yet some smokers find strong intoxication disturbing. An accelerated heart rate and sharpened awareness of bodily sensations cause some smokers to fear their hearts will “run away” with them. Some smokers are frightened by disorientation and fear they will not “come back.” High levels of intoxication now and then induce nausea and vomiting.

Cannabis dependence is associated more with patterns of compulsive use or psychological dependence than with physiological dependence. Although tolerance to many of the drug's effects may occur with chronic use, some users report reverse tolerance, or *sensitization*.

Although a clear-cut withdrawal syndrome has not been reliably demonstrated, recent evidence identified a definable withdrawal syndrome among long-term, heavy users who stopped using the drug abruptly.

## THEORETICAL PERSPECTIVES

People begin using psychoactive substances for various reasons. Some adolescents start using drugs because of peer pressure or because they believe drugs make them seem more sophisticated or grown up. Some use drugs as a way of rebelling against their parents or society at large. Regardless of why people get started with drugs, they continue to use them because drugs produce pleasurable effects or because they find it difficult to stop. Most adolescents drink alcohol to “get high,” not to establish that they are adults. Many people smoke cigarettes for the pleasure they provide. Others smoke to help them relax when they are tense and, paradoxically, to give them a kick or a lift when they are tired. Many would like to quit but find it difficult to break their addiction.

People who are anxious about their jobs or social lives may be drawn to the calming effects of alcohol, marijuana (in certain doses), tranquilizers, and sedatives. People with low self-confidence and self-esteem may be drawn to the ego-bolstering effects of amphetamines and cocaine. Many poor young people attempt to escape the poverty, anguish, and tedium of inner-city life through using heroin and similar drugs. More well-to-do adolescents may rely on drugs to manage the transition from dependence to independence and major life changes concerning jobs, college, and lifestyles.

### **Biological Perspectives**

**Neurotransmitters** Many psychoactive drugs, including nicotine, alcohol, heroin, marijuana, and especially cocaine and amphetamines, increase levels of the neurotransmitter dopamine in the brain’s pleasure or reward circuits—the networks of neurons responsible for producing feelings of pleasure or states of euphoria. Over time, regular use of these drugs reduces the brain’s own production of dopamine. Consequently, the brain’s natural reward system—the “feel good” circuitry that produces states of pleasure associated with the ordinarily rewarding activities of life, such as consuming a satisfying meal and engaging in pleasant activities—

becomes blunted. In effect, the addict's brain comes to depend on having the drug available to produce feelings of pleasure or satisfaction. Without drugs, life may not seem to be worth living. Changes in the dopamine system may help explain the intense cravings and anxiety that accompany drug withdrawal and the difficulty people have maintaining abstinence. Although investigators highlight the role of dopamine in helping us understand the biochemical bases of substance abuse and dependence, they recognize that other neurotransmitters, including serotonin and endorphins, also play a role.

Use of the drug increases the availability of neurotransmitters norepinephrine and dopamine by interfering with the process by which excess molecules of these chemicals are reabsorbed by the transmitting neuron through a process called *reuptake*. High levels of these neurotransmitters therefore remain active in the synaptic gaps between neurons within brain networks that control feelings of pleasure, thereby magnifying and extending feelings the pleasurable effects of the drug.

Endorphins are a class of neurotransmitters that have pain-blocking properties similar to those of opioids such as heroin. Endorphins and opiates dock at the same receptor sites in the brain. Normally, the brain produces a certain level of endorphins that maintains a psychological steady state of comfort and potential to experience pleasure. However, when the body becomes habituated to a supply of opioids, it may stop producing endorphins. This makes the user dependent on opiates for comfort, relief from pain, and pleasure. When the habitual user stops using heroin or other opiates, feelings of discomfort and little aches and pains may be magnified until the body resumes adequate production of endorphins. This discomfort may account, at least in part, for the unpleasant withdrawal symptoms that opiate addicts experience. However, this model remains speculative, and more research is needed to document direct relationships between endorphin production and withdrawal symptoms.

**Genetic Factors** Evidence links genetic factors to various forms of substance use and abuse, including alcohol abuse and dependence, heroin dependence, and even cigarette smoking (nicotine dependence). Alcoholism tends to run in families (APA, 2000). The closer the genetic relationship, the greater is the risk. Familial patterns provide only suggestive evidence of genetic factors, because families share a common environment as well as common genes. More definitive evidence comes from twin and adoptee studies.

Monozygotic (MZ) twins have identical genes, whereas fraternal or dizygotic (DZ) twins share only half of their genes. If genetic factors are involved, we would expect MZ twins to have higher concordance (agreement) rates for alcoholism than DZ twins. Evidence of higher concordance rates for alcoholism is found among MZ twins than DZ twins, although the results are more consistent for male samples than female samples.

A limitation of twin studies is that MZ twins may share more environmental as well as genetic similarity than DZ twins. That is, they may be treated more alike than DZ twins. However, evidence also shows that male adoptees whose biological parents suffered from alcoholism have an increased risk of developing alcoholism themselves, even if they are raised in nondrinking homes. Among women, however, the rate of alcoholism in adopted-away daughters of parents with alcoholism is only slightly higher than that for adopted-away daughters of nonalcoholics, thus casting doubt on a strong genetic linkage to alcoholism in women. All in all, genetic factors are believed to play a moderate role in male alcoholism and a modest role in female alcoholism. If alcoholism or other forms of substance abuse and dependence are influenced by genetic factors, what exactly is inherited? Some clues are emerging. Alcoholism, nicotine dependence, and opioid addiction are linked to genes that determine the structure of dopamine receptors in the brain. As we've noted, dopamine is involved in regulating states of pleasure, so one possibility is that genetic factors enhance feelings of pleasure derived from alcohol. The genetic vulnerability to alcoholism most probably involves a combination of factors, such as reaping greater pleasure from alcohol and a capacity for greater biological tolerance for the drug. People who can tolerate larger doses of alcohol without incurring upset stomachs, dizziness, and headaches may have difficulty knowing when to stop drinking. Thus people who are better able to "hold their liquor" may thus be at greater risk of developing drinking problems. They may need to rely on other cues, such as counting their drinks, to limit their drinking. Other people whose bodies more readily "put the brakes" on excess drinking may be less likely to develop problems in moderating their drinking.

Whatever the role of heredity in alcohol dependence and other forms of substance dependence, genes do not dictate behavior; they interact with environmental factors. For example, being raised in an environment free of parental alcoholism is associated with a lower risk of alcohol-related disorders in people at high genetic risk of these disorders. In sum, addiction experts

believe that multiple genes acting together with social, cultural, and psychological factors contribute to the the development of alcoholism and other forms of substance dependence

### **Learning Perspectives**

Learning theorists propose that substance-related behaviors are largely learned and can, in principle, be unlearned. They focus on the roles of operant and classical conditioning and observational learning. Substance abuse problems are not regarded as symptoms of disease but rather as problem habits. Although learning theorists do not deny that genetic or biological factors may increase susceptibility to substance abuse problems, but they emphasize the role of learning in the development and maintenance of these problem behaviors. They also recognize that people who suffer from depression or anxiety may turn to alcohol as a way of relieving these troubling emotional states, however briefly. Evidence shows that emotional stress, such as anxiety or depression, often sets the stage for the development of substance abuse.

Drug use may become habitual because of the pleasure (positive reinforcement) or temporary relief (negative reinforcement) from negative emotions, such as anxiety and depression, which drugs can produce. With drugs like cocaine, which appear capable of directly stimulating pleasure mechanisms in the brain, the positive reinforcement is direct and powerful.

**Operant Conditioning** People may initially use a drug because of social influence, trial and error, or social observation. In the case of alcohol, they learn that the drug can produce reinforcing effects, such as feelings of euphoria, and reductions in anxiety and tension. Alcohol may also reduce behavioral inhibitions. Alcohol can thus be reinforcing when it is used to combat depression (by producing euphoric feelings, even if short lived), to combat tension (by functioning as a tranquilizer), or to help people sidestep moral conflicts (for example, by dulling awareness of moral prohibitions). Substance abuse may also provide social reinforcers, such as the approval of drug-abusing companions and, in the cases of alcohol and stimulants, the (temporary) overcoming of social shyness.

**Alcohol and Tension Reduction** Learning theorists have long maintained that one of the primary reinforcers for using alcohol is relief from states of tension or unpleasant states of arousal. According to the *tension-reduction theory*, the more often one drinks to reduce tension or anxiety, the stronger or more habitual the habit becomes. We can think of some uses of

alcohol and other drugs as forms of *self-medication*—as a means of using the pill or the bottle to ease psychological pain, at least temporarily.

Although nicotine, alcohol, and other drugs may temporarily alleviate emotional distress, they cannot resolve underlying personal or emotional problems. Rather than learning to resolve these problems, people who turn to alcohol or other drugs as forms of self-medication often find themselves facing additional substance-related problems.

**Negative Reinforcement and Withdrawal** Once people become physiologically dependent, negative reinforcement comes into play in maintaining the drug habit. In other words, people may resume using drugs to gain relief from unpleasant withdrawal symptoms. In operant conditioning terms, relief from unpleasant withdrawal symptoms is a negative reinforcer for resuming drug use. For example, the addicted smoker who quits cold turkey may shortly return to smoking to fend off the discomfort of withdrawal.

**The Conditioning Model of Cravings** Classical conditioning may help explain drug cravings. In this view, cravings reflect the body's need to restore high blood levels of the addictive substance and thus have a biological basis. But they also come to be associated with environmental cues associated with prior use of the substance. These cues, such as the sight or aroma of an alcoholic beverage or the sight of a needle and syringe, become conditioned stimuli that elicit a conditioned response: strong cravings for the drug. For example, socializing with certain companions (“drinking buddies”) or even passing a liquor store may elicit conditioned cravings for alcohol. In support of this theory, alcoholic subjects show distinctive changes in brain activity in areas of the brain that regulate emotion, attention, and appetitive behavior when shown pictures of alcoholic beverages. Social drinkers, by comparison, do not show this pattern of brain activation. Sensations of anxiety or depression that are paired with the use of alcohol or drugs may also elicit cravings. The following case illustrates conditioned cravings to environmental cues.

Similarly, some people are primarily “stimulus smokers.” They reach for a cigarette in the presence of smoking-related stimuli, such as seeing someone smoke or smelling smoke. Smoking becomes a strongly conditioned habit because it is paired repeatedly with many situational cues—watching TV, finishing dinner, driving in the car, studying, drinking or socializing with friends, sex, and, for some, using the bathroom.

The conditioning model of craving receives support from research showing that people with alcoholism tend to salivate more than others at the sight and smell of alcohol. Pavlov's classic experiment conditioned a salivation response in dogs by repeatedly pairing the sound of a bell (a conditioned stimulus) with the presentation of food powder (an unconditioned stimulus). Salivation among people who develop alcoholism can also be viewed as a conditioned response to alcohol related cues. People with drinking problems who show the greatest salivary response to alcohol cues may be at highest risk of relapse. They may also profit from conditioning based treatments designed to extinguish responses to alcohol-related cues.

In one treatment occurring over a series of sessions, called *cue exposure training*, the person is seated in front of alcohol-related cues, such as open alcoholic beverages, but prevented from imbibing. The pairing of the cue (alcohol bottle) with non-reinforcement (by dint of preventing drinking) may lead to extinction of the conditioned craving. However, cravings can, and often do, return after treatment when people go back to their usual environments.

**Observational Learning** Modeling or observational learning plays an important role in determining risk of substance abuse problems. Parents who model inappropriate or excessive drinking or use of illicit drugs may set the stage for maladaptive drug use in their children. Evidence shows that adolescents who have a parent who smokes face a substantially higher risk of smoking than do their peers in families where neither parent smokes. Other investigators find that having friends who smoke influences adolescents to begin smoking.

### **Cognitive Perspectives**

Evidence supports the role of cognitive factors in substance abuse and dependence, especially the role of expectancies. Expectancies about the perceived benefits of using alcohol or other drugs and smoking cigarettes clearly influence the decision to use these substances. Outcome expectancies in teens—what they expect a drug's effects will be—are strongly influenced by the beliefs of their peers. The degree to which friends hold positive attitudes toward alcohol use is thus an important factor in alcohol use in adolescents. Public health campaigns appear to be having some impact in changing attitudes of young people toward cigarette smoking. Adolescents in a Midwestern community showed more negative attitudes toward smoking than did adolescents a generation earlier.

Alcohol or other drug use may also boost *self-efficacy expectations*—personal expectancies we hold about our ability to successfully perform tasks. If we believe we need a drink or two (or more) to “get out of our shell” and relate socially to others, we may come to depend on alcohol in social situations.

Expectancies may account for the “one-drink effect”—the tendency of chronic alcohol abusers to binge once they have a drink. If people with alcohol-related problems believe that just one drink will cause a loss of control, they may perceive the outcome as predetermined when they drink. Having even one drink may thus escalate into a binge. This type of expectation is an example of what Aaron Beck calls *absolutist thinking*. When we insist on seeing the world in black and white rather than shades of gray—as either complete successes or complete failures—we may interpret one bite of dessert as proof we are off our diets, or one cigarette as proof we are hooked again.

Rather than telling ourselves, “Okay, I goofed, but that’s it. I don’t have to have more”, we encode our lapses as catastrophes and transform them into relapses. Still, alcohol dependent people who believe they may go on a drinking binge if they have just one drink are well advised to abstain.

### **Psychodynamic Perspectives**

According to traditional psychodynamic theory, alcoholism reflects an *oral-dependent personality*. Psychodynamic theory also associates excessive alcohol use with other oral traits, such as dependence and depression, and traces the origins of these traits to fixation in the oral stage of psychosexual development. Excessive drinking or smoking in adulthood symbolizes an individual’s efforts to attain oral gratification.

Research support for these psychodynamic concepts is mixed. Although people who develop alcoholism often show dependent traits, it is unclear whether dependence contributes to or stems from problem drinking. Chronic drinking, for example, is connected with loss of employment and downward movement in social status, both of which would render drinkers more reliant on others for support. Moreover, an empirical connection between dependence and alcoholism does not establish that alcoholism represents an oral fixation that can be traced to early development.

Then too, many—but certainly not all—people who suffer from alcoholism have antisocial personalities characterized by independence seeking as expressed through rebelliousness and

rejection of social and legal codes. All in all, there doesn't appear to be any single alcoholic personality.

### **Sociocultural Perspectives**

Drinking is determined, in part, by where we live, whom we worship with, and the social or cultural norms that regulate our behavior. Cultural attitudes can encourage or discourage problem drinking. Church attendance, for example, is generally connected with abstinence from alcohol. Perhaps people who are more willing to engage in culturally sanctioned activities, such as going to spiritual worships, are also more likely to adopt culturally sanctioned prohibitions against excessive drinking. Rates of alcohol use also vary across cultures.

Peer pressure and exposure to a drug subculture are important influences in determining substance use among adolescents and young adults. Kids who start drinking before age 15 stand a fivefold higher risk of developing alcohol dependence in adulthood than do teens who began drinking at a later age. Support from family members can reduce the negative influence of drug-using peers on the adolescent's use of tobacco and other drugs.

### **Treatment of Substance Dependence**

Treatment of substances specifically depend on the kind of substance to which the individual is addicted to and hence the treatment strategies vary, although, they come under any one of the broad perspectives of psychotherapeutic approaches.

#### **Treatment of Alcohol Use Disorder**

**Inpatient Hospital Treatment** Often, the first step in treatment for substance use disorders is called **detoxification**. Withdrawal from substances including alcohol can be difficult, both physically and psychologically. Although detoxification does not have to occur in a hospital setting, it can be less unpleasant in such a supervised setting. Many people have to go through the detoxification process multiple times. Unfortunately, multiple previous detoxifications are associated with a poorer response to treatment. Inpatient treatment is probably necessary for people with few sources of social support who are living in environments that encourage the abuse of alcohol, especially people with serious psychological problems in addition to their alcohol problems.

***Alcoholics Anonymous*** The largest and most widely known self-help group in the world is Alcoholics Anonymous (AA), founded in 1935 by two recovering alcoholics. It has over 100,000 chapters and a membership numbering more than 2 million people in the United States and in more than 100 other countries. In 2009, over half of the people who received treatment for alcohol or drug use disorders did so through a self-help program like AA.

Each AA chapter runs regular and frequent meetings at which newcomers rise to announce that they are alcoholics and older, sober members give testimonials, relating the stories of their problems with alcohol and indicating how their lives are better now. The group provides emotional support, understanding, and close counseling as well as a social network. Members are urged to call on one another around the clock when they need companionship and encouragement not to relapse. Programs modeled after AA are available for other substances, for example, Cocaine Anonymous and Marijuana Anonymous.

The AA program tries to instill in each member the belief that alcohol dependence is a disease that can never be cured and that continuing vigilance is necessary to resist taking even a single drink, lest uncontrollable drinking begin all over again. Even if the person has not consumed any alcohol for 15 years or more, the designation “alcoholic” is still necessary according to the tenets of AA, since the person is always an alcoholic, always carrying the disease, even if it is currently under control.

The spiritual aspect of AA is apparent in the 12 steps of AA, shown below and there is evidence that belief in this philosophy is linked with achieving abstinence. Other self-help groups do not have the religious overtones of AA, relying instead on social support, reassurance, encouragement, and suggestions for leading a life without alcohol. One such approach, termed *Rational Recovery*, focuses on promoting renewed self-reliance rather than reliance on a higher power.

### **The 12 Steps of Alcoholics Anonymous**

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.

6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and, when we were wrong, promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

*Source:* The Twelve Steps and Twelve Traditions. Copyright © 1952 by Alcoholics Anonymous World Services, Inc. Reprinted with permission of Alcoholics Anonymous World Services, Inc.

**Couples Therapy** Behaviorally oriented marital or couples therapy has been found to achieve some reductions in problem drinking, even a year after treatment has stopped, as well as some improvement in couples' distress generally.

**Cognitive and Behavioral Treatments** Contingency management therapy is a cognitive behavior treatment for alcohol and drug use disorders that involves teaching people and those close to them to reinforce behaviors inconsistent with drinking—for example, taking the drug Antabuse (that physically controls the body from dependence) and avoiding situations that were associated with drinking in the past. It is based on the belief that environmental contingencies can play an important role in encouraging or discouraging drinking. Vouchers are provided for not using a substance (alcohol, cocaine, heroin, marijuana; verified by urine samples), and the tokens are exchangeable for things that the person would like to have more of. This therapy also includes teaching job-hunting and social skills, as well as assertiveness training for refusing drinks. For socially isolated people, assistance and encouragement are provided to establish contacts with other people who are not associated with drinking.

**Relapse prevention** is another cognitive behavioral treatment that has been effective with alcohol and drug use disorders. It can be a stand-alone treatment or a part of other interventions. Broadly, the goal is to help people avoid relapsing back into drinking or drug use once they have stopped. Marlatt and Gordon (1985) developed an approach to treatment called relapse prevention specifically to prevent relapse in substance abuse. In this approach, people dependent on alcohol are encouraged to believe that a lapse will not inevitably precipitate a total relapse and should be regarded as a learning experience rather than as a sign that the battle is lost, a marked contrast from the AA perspective. This noncatastrophizing approach to relapse after therapy—falling off the wagon—is important because the overwhelming majority of people who are dependent on alcohol who become abstinent experience one or more relapses over a 4-year period on an average. People dependent on alcohol examine sources of stress in their work, family, and relationships so that they can become active and responsible in anticipating and resisting situations that might lead them into excessive drinking.

The sources of stress that precipitate a relapse in alcohol use disorder may be different for men and women. For women, marital stress is a predictor of relapse. For men, however, marriage seems to protect them from relapse.

Relapse prevention treatment appears to be more effective with some substances than with others. Most smokers relapse within a year of stopping, regardless of the means used to stop. People who smoked the most—and are presumably more addicted to nicotine—relapse more often and more quickly than moderate or light smokers. Frequent slips, intense cravings and withdrawal symptoms, low tolerance for distress, younger age, physiological dependence on nicotine, low self-efficacy, stressful life events, observing other smokers, weight concerns, and previous quitting attempts are all predictors of relapse. Many smokers experience high levels of negative affect before their target quit day and that this anticipatory negative affect predicted a greater likelihood of relapse.

Intensive interventions, such as telephone counseling, also help; however, they reach relatively few smokers. Brief relapse prevention interventions during medical visits are cost-effective and could potentially reach most smokers but are not consistently delivered.

**Moderation in Drinking** At least since the advent of Alcoholics Anonymous, many have believed that people with alcohol use disorder had to abstain completely if they were to be

successfully treated, for they were assumed to have no control over drinking once they had taken that first drink. Considering the social difficulty of avoiding alcohol altogether, it may be preferable to teach a person who does not use alcohol in an extreme fashion to drink with moderation.

The term **controlled drinking** was introduced into the domain of alcohol treatment by Mark and Linda Sobell (1993). It refers to a pattern of alcohol consumption that is moderate, avoiding the extremes of total abstinence and inebriation. The Sobells' current approach to teaching moderation to people with alcohol use disorder is called *guided self-change*. The basic assumption is that people have more potential control over their immoderate drinking than they typically believe and that heightened awareness of the costs of drinking to excess as well as of the benefits of abstaining or cutting down can be of material help. For example, getting the person to delay 20 minutes before taking a second or third drink can help him or her reflect on the costs versus the benefits of drinking to excess. Evidence supports the effectiveness of this approach in helping people moderate their intake and otherwise improve their lives.

### Medications

Some people who are in treatment for alcohol use disorder, inpatient or outpatient, take disulfiram, or **Antabuse**, a drug that discourages drinking by causing violent vomiting if alcohol is ingested. As one can imagine, adherence to an Antabuse regimen can be a problem. For it to be effective, a person must already be strongly committed to change. However, in a large, multicenter study, Antabuse was not shown to have any benefit, and dropout rates were as high as 80 percent.

There is, of course, the more general question of whether treating a substance abuse problem by giving another drug is necessarily a prudent strategy if one believes that some people come to rely on drugs in part because they are looking for a chemical solution to problems in their lives. Nevertheless, to the extent that medications are an effective treatment for alcohol dependence, disallowing them due to a concern over substituting one drug for another seems misguided.

### Treatments for Smoking

The numerous laws that currently prohibit smoking in restaurants, trains, airplanes, and public buildings are part of a social context that provides incentives and support to stop smoking. In

addition, people are more likely to quit smoking if other people around them quit. A longitudinal study of over 12,000 people documented that if people in one's social network quit smoking (spouses, siblings, friends, co-workers), the odds that a person will quit smoking are much greater. For example, if a person's spouse stopped smoking, his or her chances of continued smoking decreased by nearly 70 percent. In short, peer pressure to quit smoking appears to be as effective as peer pressure to start smoking once was.

Some smokers who want to quit attend smoking clinics or consult with professionals for other specialized smoking-reduction programs. Even so, it is estimated that only about half of those who go through smoking-cessation programs succeed in abstaining by the time the program is over; only about 20 percent of those who have succeeded in the short term actually remain nonsmoking after a year. The greatest success overall is found among smokers who are better educated, older, or have acute health problems.

**Psychological Treatments** Probably the most widespread psychological treatment consists of a physician telling the person to stop smoking. Each year millions of smokers are given this counsel—because of hypertension, heart disease, lung disease, or diabetes, or on general grounds of preserving or improving health. Indeed, by age 65, most smokers have managed to quit. There is some evidence that a physician's advice can get some people to stop smoking, at least for a while, especially when the person also chews nicotine gum. But much more needs to be learned about the nature of the advice, the manner in which it is given, its timing, and other factors that must surely play a role in determining whether smokers are prepared and able to alter their behavior primarily on a physician's say-so.

Another treatment approach that seems to work is called scheduled smoking. The strategy is to reduce nicotine intake gradually over a period of a few weeks by getting smokers to agree to increase the time between cigarettes. For example, during the first week of treatment, a one-pack-a-day smoker would be put on a schedule allowing only 10 cigarettes per day; during the second week, only 5 cigarettes a day would be allowed; and during the third week, the person would taper off to zero. The cigarettes would have to be smoked on a schedule provided by the treatment team, not when the smoker feels an intense craving. In this way, the person's smoking behavior is controlled by the passage of time rather than by urges, mood states, or situations. Other smoking-cessation approaches for teens, including cognitive behavior therapy and

motivational approaches, have been shown to be effective at getting adolescents to quit smoking. Cognitive behavioral approaches focus on problem solving and coping skills.

***Nicotine Replacement Treatments and Medications*** Reducing a smoker's craving for nicotine by providing it in a different way is the goal of nicotine replacement treatments. Attention to nicotine dependence is clearly important because the more cigarettes people smoke daily, the less successful they are at quitting. Nicotine may be supplied in gum, patches, inhalers, or electronic cigarettes. The idea is to help smokers endure the nicotine withdrawal that accompanies any effort to stop smoking. Although nicotine replacement alleviates withdrawal symptoms—which justifies its use in gum and in the nicotine patches to be described next—the severity of withdrawal is only minimally related to success in stopping smoking.

Gum containing nicotine has been available by doctor's prescription, and it is now available over the counter. The nicotine in gum is absorbed much more slowly and steadily than that in tobacco. The long-term goal is for the former smoker to be able to cut back on the use of the gum as well, eventually eliminating reliance on nicotine altogether.

### **Treatment of Drug Use Disorders**

Central to the treatment of people who use illegal drugs such as heroin and cocaine is detoxification—withdrawal from the drug itself. Heroin withdrawal reactions range from relatively mild bouts of anxiety, nausea, and restlessness for several days to more severe and frightening bouts of delirium and panic. The type of reaction depends primarily on the purity of the heroin that the person has been using.

Detoxification is the first way in which therapists try to help a person dependent on a drug, and it may be the easiest part of the rehabilitation process. Enabling the drug user to function without drugs after detoxification is extremely difficult—typically, both therapist and client experience more disappointment and sadness than success in this process. The cravings for the substance often remain even after the substance has been removed via detoxification. A variety of approaches to this task are available, including psychological treatments, drug substitution treatments, and medications.

### ***Psychological Treatments***

Contingency management with vouchers has shown promise for cocaine, heroin, and marijuana use disorders. Vouchers appear to work in the short term, but CBT appears to be an effective component of treatment for marijuana use disorder in the long term with respect to maintaining abstinence after treatment is over.

A treatment called *motivational interviewing* or *enhancement* therapy has also shown great promise. This treatment involves a combination of CBT techniques and technique associated with helping clients generate solutions that work for themselves.

Self-help residential homes are another psychological approach to treating heroin and other types of drug abuse and dependence. These homes have the following features:

- Separation of people from previous social contacts, on the assumption that these relationships have been instrumental in maintaining the drug use disorder
- A comprehensive environment in which drugs are not available and continuing support is offered to ease the transition from regular drug use to a drug-free existence
- The presence of charismatic role models, people formerly dependent on drugs who appear to be meeting life's challenges without drugs
- Direct, often intense, confrontation in group therapy, in which people are goaded into accepting responsibility for their problems and for their drug habits and are urged to take charge of their lives
- A setting in which people are respected as human beings rather than stigmatized as failures or criminals

There are several obstacles to evaluating the efficacy of residential drug-treatment programs. Because the dropout rate is high, those who remain cannot be regarded as representative of the population of people addicted to illegal drugs; their motivation to stop using drugs is probably much stronger than that of people who don't volunteer for treatment or people who drop out. Any improvement participants in these programs make may reflect their uncommonly strong desire to rid themselves of the habit more than the specific qualities of the treatment program. Such self-regulating residential communities do, however, appear to help a large number of those who remain in them for a year or so.

**Drug Replacement Treatments and Medications** Two widely used programs for heroin use disorder involve the administration of *heroin substitutes*, drugs chemically similar to heroin that can replace the body's craving for it, or *opiate antagonists*, drugs that prevent the user from experiencing the heroin high. The first category includes **methadone**, levomethadyl acetate, and bupreophine, synthetic narcotics designed to take the place of heroin. Since these drugs are themselves addicting, successful treatment essentially converts the person's dependence on heroin into dependence on a different substance. This conversion occurs because these synthetic narcotics are **cross-dependent** with heroin; that is, by acting on the same central nervous system receptors, they become a substitute for the original dependency. Abrupt discontinuation of methadone results in its own pattern of withdrawal reactions, but because these reactions are less severe than those of heroin, methadone has potential for weaning heroin users altogether from drug dependence.

Treatment with the opiate antagonists involves a drug called naltrexone. First, people are gradually weaned from heroin. Then they receive increasing dosages of naltrexone, which prevents them from experiencing any high should they later take heroin. This drug works because it has great affinity for the receptors to which opiates usually bind; their molecules occupy the receptors without stimulating them. This leaves heroin molecules with no place to go, and therefore heroin does not have its usual effect on the user. As with methadone, however, treatment with naltrexone involves frequent (daily) and regular visits to a clinic, which requires motivation. In addition, people may not lose the craving for heroin for some time. Both clinical effectiveness and treatment compliance can be increased by adding a contingency management component to the therapy. Giving people vouchers that they can exchange for food and clothing in return for taking naltrexone and having drug-free urine samples markedly improves effectiveness.

Treatment with a heroin substitute usually involves going to a drug-treatment clinic and swallowing the drug in the presence of a staff member, once a day for methadone and three times a week for levomethadyl acetate and bupreophine. There is some evidence that methadone maintenance can be carried out more simply and just as effectively by weekly visits to a physician. The effectiveness of methadone treatment is improved if a high (80- to 100-milligram) dose is used as opposed to the more typical 40- to 50-milligram dose and if it is combined with regular psychological counseling. Drug treatment experts generally believe that treatment with

heroin substitutes is best conducted in the context of a supportive social interaction, not merely as a medical encounter.

Since methadone does not provide a euphoric high, many people will return to heroin if it becomes available to them. In an effort to improve outcomes, researchers have tried adding contingency management to the usual treatment at methadone clinics. In one randomized controlled trial, people receiving methadone from a clinic could draw for prizes each time they submitted a (carefully supervised and obtained) urine sample that had no trace of illegal drugs or alcohol. Prizes ranged from praise to televisions. People who were in the contingency management group were more likely to remain drug-free than those people who received only usual care from the methadone clinic. Of course, it remains to be seen whether such abstinence gains can be maintained after treatment ends and therapists are no longer providing such incentives.

Unfortunately, many people drop out of methadone programs, in part because of side effects such as insomnia, constipation, excessive sweating, and diminished sexual functioning. Age of entry into treatment may be important—the older the person, the greater the likelihood that he or she will stick with the treatment regimen.

Drug replacement does not appear to be an effective treatment for cocaine abuse and dependence. Researchers recently developed a vaccine to prevent the high associated with cocaine use. The vaccine contains tiny amounts of cocaine attached to otherwise harmless pathogens. The body's immune system responds to this invasion by developing antibodies that then squelch the cocaine. It is hoped that with repeated exposure, the antibodies will be able to keep a good deal of the cocaine from reaching the brain. However, during a clinical trial with over 100 people addicted to cocaine, it was not particularly promising.

### **Prevention of Substance Use Disorders**

Many prevention efforts have been aimed at adolescents because substance use disorders in adulthood often follow experimentation in the teens and earlier. Programs, usually conducted in schools, have been directed at enhancing young adolescents' self-esteem, teaching social skills, and encouraging young people to say no to peer pressure. Self-esteem enhancement has not been shown to be effective. In contrast, social skills training and resistance training (learning to say no) have shown some positive results, particularly with girls.

The measures that hold promise for persuading young people to resist smoking may also be useful in dissuading them from trying illicit drugs and alcohol. Brief family interventions show such promise. For adolescents, family treatments may also have preventative effects. Research has shown that the longer alcohol use is delayed, the less likely alcohol dependence will develop, suggesting that preventive interventions can play a big role in keeping the prevalence of alcohol dependence down. Comprehensive tobacco control programs, which include increasing taxes on cigarettes, restricting tobacco advertising, conducting public education campaigns, and creating smoke-free environments, appear to be an effective strategy for reducing teenage smoking.