Addictions
Education is a liberating force, and in our age it is also a democratising force, cutting across the barriers of caste and class, smoothing out inequalities imposed by birth and other circumstances."

—Indira Gandhi
Block

4

ADDITIONS

UNIT 1
Alcoholism

UNIT 2
Substance Abuse and Addiction

UNIT 3
Tobacco Addiction

UNIT 4
Gambling, Internet and other Addictions
### Expert Committee

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### Course Writer

**Units 1, 2 and 3**

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BLOCK 4  ADDICTIONS

Introduction

Block 4 of MPC 053 deals with Addictions. Society is changing rapidly. Technology is advancing in leaps and bounds. The values of the society along with personal values are declining. People are indulging in various activities for example, taking recourse to alcohol, tobacco and gambling that may have a negative repurcussions on themselves as well as their family. With the advent of internet age, more and more youngsters are becoming addicted to it that has an adverse effect on their physical as well as mental health.

In this Block 4 of MPC 053, we will be focusing on various types of addictions, their characteristic features and intervention strategies to deal with these.

Unit 1 is about “Alcoholism”. The prevalence of alcoholism is increasing and it is affecting our human resource negatively. Here you will be learning about the consequences of alcoholism, assessment of alcohol addiction and treatment of it.

Unit 2 describes “Substance Abuse and Addiction”. It deals with the use of various drugs/substance by people. The use and misuse of drugs is affecting our adolescents, adult and the elderly also. In this Unit, you will learn about the types of drugs, symptoms in various types of substance intoxication, and the treatment and management of substance abuse and addiction.

Unit 3 is on “Tobacco Addiction”. In this Unit you will understand about tobacco and nicotine dependence and its health hazards. The Unit will also discuss the causes, assessment, and treatment of tobacco dependence.

Unit 4 deals with “Gambling, Internet and Other Addictions”. You will learn about the characteristic features of various behavioural addiction. Gambling and internet addiction, being the most prevalent, it is important that we understand their causes and assessment procedure. The Unit will also describe various intervention methods for dealing with behavioural addictions.
UNIT 1  ALCOHOLISM

Structure
1.0  Introduction
1.1  Objective
1.2  Addiction and Dependence
1.3  Classification of Dependence Syndrome
1.4  Dual Diagnosis of Alcohol Abuse and Dependence
1.5  Consequences of Alcohol Abuse and Dependence
1.6  Etiology of Alcohol Abuse and Dependence
1.7  Assessment of Alcohol Abuse and Dependence
1.8  Treatment of Alcohol Problems
   1.8.1  Psychological Approaches
   1.8.2  Pharmacotherapy
   1.8.3  Preventing Relapse
1.9  Let Us Sum Up
1.10 Answers to Self Assessment Questions
1.11 Unit End Questions
1.12 Suggested Readings and References

1.0  INTRODUCTION
Alcohol is one of the oldest drugs known to man. It has been an important part of world cuisines and a consistent feature on occasions ranging from celebrations to funerals across cultures. Yet, there have always been those who have been unable to restrict their use of alcohol and have suffered grievous consequences as a result. These persons are often referred to as ‘alcoholics’ in lay terms. The concept of alcoholism is best understood in the context of ‘addiction’. The term addiction usually conjures up images of alcoholics and other drug addicts who manifest physical and/or psychological need for chemical substances. Such individuals rely on substances to function or feel good (psychological dependence). When their bodies reach a state of biological adjustment to the chronic presence of a chemical substance (physical dependence), they require increasing amounts to achieve the desired effect (tolerance). When denied access to their chemical elixirs, their bodies experience adverse effects (withdrawal), typically the opposite bodily effects as those sought. In this Unit, you will understand about the diagnosis, consequences, etiology and treatment for alcoholism.

1.1  OBJECTIVES
After studying this Unit, you will be able to:

●  differentiate between addiction and dependence;
●  describe classification of dependence syndrome;
●  explain dual diagnosis of alcohol use disorder;
• describe the consequences of alcohol misuse;
• explain the etiology related to alcohol abuse and dependence;
• understand the effects of alcohol withdrawal syndrome;
• know the screening for alcohol problem and tool for assessment of dependence; and
• discuss the treatment and management of alcohol problem.

1.2 ADDICTION AND DEPENDENCE

Researchers and clinicians traditionally limit ‘addiction’ to alcohol and other drugs. Yet, neuroadaptation, the technical term for the biological processes of tolerance and withdrawal, also occurs when substance-free individuals become addicted to pathological gambling, pornography, eating, overwork, shopping, and other compulsive excesses (Coombs, 2004).

Recent scientific advances over the past decade indicate that addiction is a brain disease that develops over time as a result of initially voluntary behaviour. “The majority of the biomedical community now consider addiction, in its essence, to be a brain disease,” said Alan Leschner (2001), former Director of the National Institute on Drug Abuse (NIDA); “a condition caused by persistent changes in brain structure and function.”

Addiction is, thus, a disease in and of itself, characterized by compulsion, loss of control, and continued use in spite of adverse consequences (Coombs, 1997; Smith & Seymour, 2001).

The primary elements of addictive disease are three Cs:

1) **Compulsive use**: an irresistible impulse; repetitive ritualized acts and intrusive, ego-dystonic (i.e., ego alien) thoughts e.g. the person cannot start the day without a cigarette and/or a cup of coffee. Evening means a ritual martini, or two, or three. In and of itself, however, compulsive use doesn’t automatically mean addiction.

2) **Loss of Control**: the inability to limit or resist inner urges; once begun it is very difficult to quit, if not impossible, without outside help. This is the pivotal point in addiction. The individual swears that there will be no more episodes, that he or she will go to the party and have two beers. Instead, the person drinks until he or she experiences a blackout and swears the next morning to never do it again; only to repeat the behaviour the following night. The individual may be able to stop for a period of time, or control use for a period of time, but will always return to compulsive, out-of-control use.

3) **Continued use despite adverse consequences**: use of the substance continues inspite of increasing problems that may include declining health, such as liver impairment in the alcohol addict; embarrassment, humiliation, shame; or increasing family, financial, and legal problems.

Substance dependence is the term which formally replaced ‘addiction’ in medical terminology in 1964 when the World Health Organizations Expert Committee on Drug Abuse proposed that the terms addiction and habituation be replaced with the term dependence and distinguished between two types- psychological dependence and physical dependence. Psychological dependence refers to “the experience of impaired control over drug use” while physical dependence involves “the development of
tolerance and withdrawal symptoms upon cessation of use of the drug, as a consequence of the body’s adaptation to the continued presence of a drug event” (UNIDCP, 1998).

Dependence conditions include Alcohol use disorders which often present as other psychiatric syndromes. The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), and the International Classification of Diseases, Tenth Revision (ICD-10) provide diagnostic criteria for the phenotypes “alcohol abuse” and “alcohol dependence.” These two distinct categories have replaced the term “alcoholism,” which was first discarded in DSM-III (National Institute on Alcohol Abuse and Alcoholism, 1995).

Alcohol consumption and alcohol dependence make a substantial contribution to the current global burden of disease and account for 4.6% of all global disability-adjusted life-years lost to illness (Rehm, Mathers & Popova, et al. 2009).

There are several alcohol dependence typologies. Two of the most popular ones along with their phenotypic characteristics are (Jellinek, 1960):

**alpha:** representing a purely psychological continued dependence without loss of control or inability to abstain

**beta:** physical complications without physical or psychological dependence

**gamma:** acquired tissue tolerance, adaptive cell metabolism, physical dependence and loss of control

**delta:** shares the first three features of gamma, but inability to abstain replaces loss of control

**epsilon:** dipsomania or periodic alcoholism

Cloninger et al.1981; Sigvardsson et al.1996 have distinguished between Type 1 and Type 2 alcoholism:

**Type 1 alcoholism**
- Age of onset over 25 years
- No criminality or treatment for alcohol problems in the biological parents
- Loss of control (or psychological dependence)
- Guilt and fear about dependence
- Harm avoidance
- Reward dependence

**Type 2 alcoholism**
- Teenage age of onset (under 25 years)
- Alcohol abuse, criminality and treatment are extensive in the biological father
- Inability to abstain
- Aggressive behaviour
- Novelty-seeking personality traits
1.3 CLASSIFICATION OF DEPENDENCE SYNDROME

There is high agreement for the dependence syndrome construct across the two diagnostic systems- Diagnostic and Statistical Manual- IV-TR (American Psychiatric Association, 2000) and International Classification of Diseases-10 (World Health Organization, 1992). The ICD-10 includes a strong desire or sense of compulsion to use substances, impaired capacity to control substance use, a physiological withdrawal state with withdrawal relief and avoidance, tolerance, a preoccupation with substance use and persistent substance use despite clear evidence of harmful consequences. DSM-IV TR includes tolerance, withdrawal, a persistent desire for or unsuccessful effort to control substance use, substances taken in larger amounts or over longer periods than intended, time spent in obtaining substances, reduction in obligations and activities and continued use despite knowledge about harmful consequences. DSM-IV TR does not include craving or compulsion to take substances but concedes that craving (a strong subjective desire to use the substance) is likely to be experienced by most (if not all) individuals with substance dependence.

Diagnostic guidelines for Dependence Syndrome in ICD-10 (WHO, 1992)

A definite diagnosis of dependence should usually be made only if three or more of the following have been experienced or exhibited at some time during the previous year:

a) A strong desire or sense of compulsion to take the substance;

b) Difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use;

c) A physiological withdrawal state when substance use has ceased or has been reduced, as evidenced by the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms;

d) Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effect originally produced by lower;

e) Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;

f) Persisting with substance use despite clear evidence of overtly harmful consequence, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use or drug related impairment of cognitive functioning; efforts should be made to determine that user was actually, or could be expected to be, aware of the nature of extent of the harm.

The ICD-10 has opted for the newer concept of “Harmful Use” to define those individuals who do not satisfy the definition of dependence syndrome and yet, do have problems due to substance use. Harmful Use has been described as “a pattern of psychoactive substance use that is causing damage to health, the diagnosis requiring that actual damage should have been caused to the mental or physical health of the user.”
Drinking problems are complicated by a variety of concomitant problems. Of significance is the comorbidity of alcohol use disorders with other psychiatric diagnoses. A high percentage of those diagnosed with alcohol abuse or dependence also experience other psychological problems, which may be antecedent to, concurrent with, or consequent to their drinking. The most common Axis I disorders are other psychoactive substance use disorders, depression, and anxiety disorders, occurring in up to 60% of males in treatment. The most common Axis II disorder comorbid with alcoholism in males is antisocial personality disorder, with rates ranging from 15 to 50%. Females more often present with depressive disorders; 25 to 33% of women with alcoholism experience depression prior to the onset of their alcoholism (Rosenthal & Westreich, 1999).

Bipolar affective disorder poses a particular risk of alcohol misuse, as does schizophrenia, which is associated with patients being three times more likely to abuse alcohol than those without it. In general, comorbidity leads to more frequent recurrence of mental disorder, greater time spent in hospital and increased violence, homelessness and family disintegration. Some important clinical issues to emerge from these findings include that often substance use or misuse is not limited to one substance. Also, the distinction as to whether a psychiatric disorder preceded or is the result of substance use disorder can be difficult to make. It is important to recognise the role of early childhood psychiatric disorder and the likelihood that this might predispose to substance misuse in later life.

The terms comorbidity, dual diagnosis and coexisting/co-occurring substance problems and psychological disorder are used interchangeably. Comorbidity may present itself in a range of combinations and permutations, including the following:

i) Substance use – even one dose – may lead to psychological symptoms or psychiatric syndromes.

ii) Harmful use may produce psychiatric symptoms.

iii) Dependence may produce psychological symptoms.

iv) Intoxication by a substance may produce psychological symptoms.

v) Withdrawal from substances may produce psychological symptoms.

vi) Substance use may exacerbate a preexisting psychiatric disorder.

vii) Psychological morbidity not amounting to a “disorder” may precipitate substance use.

viii) Primary psychiatric disorder may lead to substance use disorder.

ix) Primary psychiatric disorder may precipitate substance use disorder, which may in turn lead to psychiatric disorder.

Self Assessment Questions 1

1) Mention the primary elements of addictive disease.

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2) Distinguish between Type 1 and Type 2 Alcoholism.

3) Dual diagnosis is also known as co-morbidity.  True  False

1.5 CONSEQUENCES OF ALCOHOL ABUSE AND DEPENDENCE

The physical complications of alcohol use are numerous. The health risks relate to the pharmacological effects of alcohol, withdrawal, toxicity and deficiency syndromes as a result of chronic abuse and from secondary effects such as domestic violence and injury resulting from drunk-driving offences. Psychological consequences of alcohol misuse are also severe.

i) Effects on the central nervous system

Alcohol acts as a blocker of messages transmitted between nerve cells in the central nervous system. There is no absolute threshold for blood alcohol concentrations below which there is no impairment of complex psychomotor skills. At blood alcohol concentrations (BAC) of 25 mg%, euphoria is apparent, lack of co-ordination occurs at levels of 50 to 100 mg% and unsteadiness, ataxia, poor judgement and labile mood are observed at 100 to 200 mg%. At 200 to 400 mg%, the drinker may be in a stage 1 anaesthetic state, with periods of amnesia. Intoxication can lead to death from coma and respiratory depression at 400 to 700 mg%. Acute intoxication with alcohol may result in coma or death resulting from CNS depression, leading to respiratory depression and cardiovascular collapse. Intoxicated patients are at an increased risk for other traumatic and medical pathologies that may precipitate or be exacerbated by head injury, infection or hypoglycaemia, which must be ruled out or appropriately treated. The effects of raised alcohol levels are modified by age, sex and degree of alcohol dependence; a high level of tolerance is indicated by high alcohol levels associated with low levels of apparent impairment.

ii) Effects of alcohol withdrawal syndromes

These may be precipitated by a variety of circumstances, including lack of money to purchase alcohol, acute illness or injury, nausea and vomiting or a decision to stop drinking. Alcohol withdrawal syndromes (AWS) can be classified by severity into mild, moderate or severe. In clinical practice, severity is often seen to present along a continuum from mild tremor through to delirium and convulsions.
Table 1: Alcohol withdrawal severity

<table>
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<tr>
<th>Mild alcohol withdrawal</th>
<th>Occurs less than 24 hours after stopping or decreasing alcohol intake. It may include tremulousness, anxiety, nausea, vomiting, sweating, hyperreflexia and minor autonomic hyperactivity (sweating, tachycardia)</th>
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<td>Moderate alcohol withdrawal</td>
<td>An intermediate position along the continuum with the hallmark of hallucinosis but an otherwise clear sensorium</td>
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<td>Severe alcohol withdrawal</td>
<td>Occurs more than 24 hours and up to 5 days after stopping agitation, hallucinations and severe autonomic derangement. Seizures may also be secondary to intoxication or trauma or as a toxic effect of alcohol. It is characterized by disorientation.</td>
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iii) Neurological nutritional deficiency syndromes

The initial presentation of nutritional deficiency in alcohol abusers may be of peripheral neuropathy and cardiovascular disorder, for example, hypotension or high-output cardiac failure (e.g. beriberi) in combination with oral inflammation, and this is the result of thiamine deficiency. Pellagra (niacin and protein deficiency) and scurvy (vitamin C deficiency) are less common.

The most important presentation of nutritional deficiency is the Wernicke-Korsakoff syndrome (WKS), which is consequent on thiamine deficiency. Wernicke’s encephalopathy (WE) and Korsakoff’s Psychosis (KP) are both part of this syndrome. Alcoholic cerebellar degeneration presents as gross ataxia, and the pathology is that of cell loss. It may respond to thiamine in the early stages. Central pontine myelinolysis and Marchiafava-Bignami syndrome are rare conditions, results from demyelination.

iv) Liver disease and gastrointestinal disorder

The spectrum of liver disease is not uniform but can be described under three main headings: fatty liver, alcoholic hepatitis and cirrhosis. In reality, there is considerable overlap in the clinical setting. Alcoholic fatty liver results from the inhibition of oxidation of fatty acids combined with an increased in generation of triglycerides. The effects can be reversed within a few weeks of abstinence from alcohol. Fatty liver is generally asymptomatic and may in the early stages produce no changes in liver function tests other than those related to the direct effect of the alcohol on liver function. It may, however, present with right abdominal pain, nausea and vomiting, which resolve on abstinence. Alcoholic hepatitis and cirrhosis result from chronic alcohol abuse. Alcoholic hepatitis produces liver cell necrosis and inflammation. The clinical presentation is with jaundice, pyrexia, right abdominal pain, ascites and possible encephalopathy. In patients with poor liver function and a prothrombin time prolonged to a degree which precludes liver biopsy, the prognosis is poor, with a third of patients dying in the acute episode.

Severe acute alcoholic hepatitis has a poor outcome with standard supportive management. Cirrhosis involves a permanent loss of liver cells, which are replaced by fibrosis with loss of the normal liver architecture. It may be asymptomatic or present with gastrointestinal symptoms, ascites, encephalopathy and oesophageal varices, which may cause haemorrhage. Acute and chronic pancreatitis and gastritis and peptic ulcer are other gastrointestinal consequences of alcohol abuse.
v) **Cancer**

Chronic alcohol consumption is a strong risk factor for cancer in the oral cavity, pharynx, hypopharynx, larynx and oesophagus and is also a major aetiological factor in hepatocarcinogenesis. Alcohol also increases the risk for cancer of the colorectum and the breast.

vi) **Cardiovascular disease**

The effects of alcohol on the cardiovascular system are well documented and range from the protective effects of light drinking for ischaemic stroke and coronary disease through to the increased risk from heavy drinking for haemorrhagic stroke, cardiomyopathy, hypertension and cardiac arrhythmias.

vii) **Reproductive disorders**

In premenopausal female alcoholics, there is an increase in the frequency of menstrual disturbances, abortions and miscarriages and infertility. Regular consumption of alcohol during pregnancy may affect the foetus. The abnormalities range from growth retardation to foetal alcohol syndrome (FAS). Children with FAS have reduced body weight and height, are hyperactive and have subnormal intelligence. Their faces may be recognized by short palpebral fissures, short upturned noses, mid facial hypoplasia, low nasal bridge and a thin upper lip.

Studies of male alcoholics have reported that alcohol consumption may affect spermatogenesis and spermogenesis and cause reduced sperm counts.

viii) **Psychological and behavioural consequences**

Alcohol abuse and dependence leads to maladaptive behaviours in the individual and has negative effect on the interpersonal relationships. It hampers fulfilling the person’s personal, family and social responsibilities. It also lowers the person’s self esteem and confidence. Irritability, lack of motivation, depression, anxiety, aggressiveness characterize the individual.

The effects of heavy drinking can be insidious and debilitating. It affects the immediate family and the self in a negative way. Even though major medical conditions may not be present, many people eat poorly when drinking, which results in nutritional deficits, poor energy, or vague and diffuse physical discomfort. Long term effects of alcohol abuse can have serious consequences. Mortality rates among persons of all ages are elevated with alcohol dependence, and are higher among women than among men.

### 1.6 ETIOLOGY OF ALCOHOL ABUSE AND DEPENDENCE

**Genetic factors**: Genetics appear to have a major role on how the brain responds to and processes psychoactive substances (Smith & Seymour, 2001).

Familial transmission of alcohol consumption and dependence has been observed since antiquity (Devor & Cloninger, 1989). Formal genetic studies of different populations have revealed that genetic factors contribute an estimated 40–60% of the variance in liability to alcohol dependence (Lynskey, Agarwal & Heath, 2010; Kendler, Chen, Dick et al. 2012). Since family members share some of their genes as well as important aspects of their environment, adoption and twin studies are conducted to distinguish between environmental and genetic factors. Family and twin studies reveal that parental alcoholism is 6 times more likely and alcoholism is more common in twins, both mono
and dizygotic. Studies show that twin children living in foster homes tend to share abuse or abstinence patterns similar to their biologic parents’ (Goodwin, 1976), and there is evidence that if both biological parents are alcoholic, the child is about 400% more likely to be alcoholic (Inaba & Cohen, 2000).

Longitudinal formal genetic studies have shown that the relative influence of genetic and environmental risk factors on AD and alcohol-related phenotypes fluctuates over time (Rose, Dick, Viken, et al. 2001; Dick., Pagan, Viken, et al. 2007; Kendler, Schmitt, Aggen, et al. 2008). Research has revealed alternation between periods in which genetic influences predominate and periods in which environmental influences are more dominant. A detailed longitudinal study by Kendler et al. (2008) showed that environmental influences on alcohol consumption were highest in adolescence. This finding suggests that adolescence may be the optimal time point for educational interventions.

**Psychological Theories:** A variety of theories relate to the use of alcohol to reduce tension, increase feelings of power, and decrease the effects of psychological pain.

**Psychodynamic Theories:** Psychoanalytic approach view the alcoholic as an oral dependent personality fixated at the oral stage of development. Lack of fulfillment of the basic need for oral gratification leads the person to become dependent on alcohol. This approach also advocates that some persons may use alcohol to help them deal with self-punitive harsh superegos as a way of decreasing unconscious stress levels. Wurmser (1984-85), for example, views the use of alcohol or drugs as an attempt to escape from intense feelings of rage and fear arising from severe intra-psychic conflict due to an overly harsh superego.

**Behavioural Theories:** Behavioural principles do go a long way toward explaining the addictive processes, even though chemically dependent people have varying personalities. For instance, *positive reinforcement*, something pleasurable happening after a behaviour occurs that makes repeating a behaviour more likely, can happen when people get high or when they feel relaxed and joyful while using substances. This may not happen every time that a person uses. A reinforcement that doesn’t occur regularly is often referred to as being on a *variable* or *intermittent* (random or unpredictable) schedule. Behavioural researchers have determined that a variable reinforcement schedule produces behaviour patterns more difficult to change than behaviour patterns reinforced on a regular basis. This occurs because a person cannot predict which use will be rewarded, so, just like gambling, a person keeps using in hopes this will be the time he or she will hit the euphoric jackpot.

In the same way, using substances can be negatively reinforcing for a person. *Negative reinforcement* occurs when an activity removes an aversive event or consequence, therefore making it more likely that the behaviour will be repeated (just like positive reinforcement). Sometimes this involves lifting a punishment and other times it might involve removing nasty physical symptoms, such as drinking to beat a hangover or using to avoid the chills. Negative reinforcement also can occur on a variable or intermittent schedule, meaning that sometimes the use alleviates the nasty symptoms, but not always. Addiction can develop as a result of these powerful behaviour patterns (desiring pleasure and avoiding discomfort) reinforced in a random and unpredictable way. The compulsion to use may arise as a conscious choice to seek highs and avoid lows, but eventually, the behaviour takes on a life of its own as reinforcement becomes less predictable.
Reinforcement Schedules and Using Substances

Continuous reinforcement means that it occurs regularly after every use, which becomes less likely as tolerance develops.

Intermittent or variable reinforcement is more likely after tolerance develops, which occurs in a random and unpredictable fashion that keeps the person coming back for more.

Chemically dependent people likely are experiencing both intermittent positive and negative reinforcement, since the substance sometimes makes them high, takes away withdrawal, and self-medicates (but not always).

Self-medication also can be thought as negative reinforcement. The person may use the substance to relieve aversive psychiatric or physical symptoms, such as depression, anxiety, or chronic pain. More often than not, the substance use may actually make the symptoms worsen over the long term. However, since using had been negatively reinforced at times by relieving symptoms, the patient may continue the use of substances to self-medicate, even if the substances make the symptoms worse.

In the typical classical conditioning paradigm, the development or “learning” of drinking behaviour occurs through repeated pairings of: (1) a conditioned stimulus (CS), such as a particular person and an unconditioned stimulus (US), such as a particular location or time of day with (2) alcohol consumption. After repeated pairings, a conditioned response (CR) develops where exposure to the CS or US results in the CR (drinking behaviour). This model has been postulated to explain the initial development and maintenance of craving and conditioned tolerance (both conditioned responses), for alcohol as well as other drugs (Wikler, 1973; Siegel, 1983).

Social Learning Model: Social learning theories focus on cognitive constructs such as expectancies, self-efficacy, and attributions to mediate the pathway from stimuli to alcohol use as a response. Expectancies of the positive effects from using alcohol develop as conditioned cognitions from repeated classical or operant pairings of alcohol use with a positive experience (i.e., reinforcement). Self-efficacy refers to the expectation by individuals that they can successfully perform a particular coping behaviour in certain situations and that the behaviour will be reinforced. The Social Learning viewpoint describes alcoholism as a result of a failure to cope. The self-efficacy for coping without alcohol is low among alcoholic individuals, contributing to continued use and the eventual development of dependence. Petraitis, Flay, and Miller (1995) have postulated a social learning theory model of adolescent experimentation and the eventual problem use of alcohol and other drugs.

Sociocultural Theories: Sociocultural theories are often based on observations of social groups that have high and low rates of alcoholism. Theorists hypothesize that ethnic groups such as Jews that introduce children to modest levels of drinking in a family atmosphere and that eschew drunkenness have low rates of alcoholism.

Some other groups such as Irish men, with high rates of abstention but a tradition of drinking to the point of drunkenness among drinkers, are thought to have high rates of alcoholism. However, these theories often depend on stereotypes that are frequently erroneous and there are several exceptions to these rules. For example, some theories based on observations of the Irish and the French would have predicted high rates of alcoholism among the Italians, although alcohol problems are not generally observed at a high level in this group.

Childhood behaviour problems: Various studies indicate that childhood problem behaviour and aspects of a child’s temperament may predict both behaviour problems
and problems with alcohol and substance abuse during adolescence and young adulthood. An association between behavioural problems (i.e., conduct problems, attention deficit disorder, and hyperactivity) occurring in childhood and adolescence and consequent poor adult outcomes, including alcoholism, has been found in a variety of samples, including child guidance clinic subjects (Robins, 1966), community samples (Jones, 1968), and among adopted individuals at risk for alcoholism (Cadoret et al., 1995). For many, these alcohol use disorders persist into young adult life and possibly beyond (Rohde et al., 2001).

**Temperament**: While considerable research has shown that a predisposition to alcoholism is partially due to genetic factors, several studies suggest that this genetic susceptibility may be expressed, in part, through an individual’s temperament. Tarter and Vanyukov (1994), for example, propose a temperament model of alcoholism risk based on five temperament traits that increase an individual’s likelihood for developing alcoholism.

These traits include behavioural activity level, sociability, attention span/persistence, emotionality, and soothability. Genetics influence each of these five traits, and an individual’s likelihood is increased or decreased by the deviation of each trait from the population norm. Thus, individuals whose personality traits are closer to the population norm are thought to have more control over their own behaviour, including substance use. Individuals who have difficulties with behavioural and emotional regulation may be more prone to developing alcoholism in relation to environmental influences and stressors, including seeking environments conducive to alcohol and drug use. Indeed, each of these traits, or trait clusters, that constitute a “difficult” temperament relate to an increased risk for developing a problem with substance use and/or abuse (Ohannessian & Hesselbrock, 1995; Tarter, Kabene, Escallier, Laird, & Jacob, 1990). It should be noted, however, that prenatal, peri-natal, and neonatal circumstances can have profound and persistent influences on temperament, as well (e.g., maternal stress and prenatal exposure to stress hormones; medications delivered during pregnancy and/or delivery; anoxia; hypoxia; birth trauma; child maltreatment; etc.).

**Environmental risk factors**: The pressures and influences of environment, particularly home environment, neighbourhood and school environment have an impact on the use of alcohol by the individual. The environmental influences can be positive or negative and as varied as stress, love, violence, sexual abuse, nutrition, living conditions, family relationships, health care, school quality, peer pressure and television that may lead to alcohol abuse and dependence.

Environmental factors that play a part in the etiology of drinking behaviour may be divided into those factors that influence the availability of alcohol and those that render the individual vulnerable to the use and abuse of alcohol. In a comparison of risk and protective factors for adolescent substance use between the United States and Australia, common risk and protective factors for the use of alcohol were identified as:

**Risks**
- Community norms favourable toward alcohol use
- Perceived availability of alcohol
- Poor family management
- Family history of substance use
- Parental attitudes favourable to alcohol use
Addictions

- Favourable attitudes toward antisocial behaviour
- Favourable attitudes toward alcohol use
- Friends’ alcohol use
- Sensation seeking
- Antisocial behaviour

**Family interaction**: Positive parental attitudes to alcohol and drug use have a major influence in shaping use in children. Where one or both parents abuse alcohol, families manifest higher levels of conflict, disruption, economic difficulties, breakdown and impaired mother-child attachment. In addition, problem drinking by parents may lead to inconsistent and unpredictable parenting behaviours and contribute to poorer monitoring of adolescent behaviour. A history of unfair, inconsistent and harsh discipline by parents predicts both alcohol and depressive disorders.

Frequently, more than one member of the nuclear or extended family experiences a substance dependency. This complicates the identification of specific influences that family environment, child-rearing practices, or inter-parental interaction may play in the development of alcoholism. Three general contemporary models of family influences can be identified: a family disease model, a family systems model, and a behavioural family approach (McCrady & Epstein, 1996; McCrady, Kahler, & Epstein, 1998).

The family disease model is based on an assumption that all family members suffer from some degree of either alcoholism or codependency. Further, alcoholism and codependency are interrelated in such a manner as to enable (perpetuate) the alcohol problem. Although in this model the specific etiology is regarded as biological, alcoholism is being maintained by the family disease (Sheehan & Owen, 1999).

In the family systems model, the etiology of alcoholism and substance abuse is focused on the behaviour of family members around drinking, with particular attention paid to the family of origin and the role of the spouse/partner (O’Farrell & Fals-Stewart, 1998; Steinglass, Bennett, Wolin, & Reiss, 1987; Steinglass, Weiner, & Mendelson, 1971). The model assumes that, over time, alcohol use stabilizes the family system and that the family organizes their interactions and structure around alcohol use to achieve and preserve system ‘homeostasis.’ In other words, the family maintains the alcohol problem despite the associated problems because it requires less effort than changing or because it allows the family to avoid changing a more disturbing problem (e.g., sexual abuse).

The behavioural family approach focuses on the family members’ behaviours (especially those of the spouse/partner), as both antecedents to and reinforcers of, alcohol or substance use. These responses are thought to help develop and maintain the drinking problem. Bennett and Wolin (1990) found that continuing interaction between adult offspring and their alcoholic parents is associated with increased rates of alcoholism, at least among the male offspring. On the other hand, certain family rituals, such as eating dinner together or celebrating holidays together, may serve to protect offspring against the development of alcoholism (cf. Bennet et al., 1987). It is important to note that family member behaviour can influence the alcoholic individual to consider change, act to change, maintain the change, or relapse to drinking (Walitzer, 1999).

**Peer affiliation**: Adolescents with alcohol- and drug-using friends are more likely to use the same substances. Some adolescents may self-select into high risk groups because of high levels of risk-taking and novelty-seeking behaviour. Adolescents often cite an increased ability to socialize with friends, reducing tension and anxiety (especially in
mixed gender situations), reducing boredom, and/or getting high as reasons for their alcohol and other substance use. Peer influences are consistently cited as risk factors for initiating alcohol, tobacco, and other drug use among children and adolescents (cf. Kandel & Yamaguhi, 1999; Wills, Vaccaro, & McNamara, 1992; Averna & Hesselbrock, 2001). Peers influence adolescents’ values, behaviours, attitudes, and choice of other friends. However, the closeness of the specific peer relationship is an important determinant of the strength of peer influences on drinking behaviour. Alcohol use by an adolescent’s best friend is more predictive of alcohol use and maintenance of drinking behaviour than reports of use by other friends. Characteristics of peers may also be relevant.

**Employment:** Certain occupations carry a higher risk of alcohol related problems. These include being a publican, where there is easy access to alcohol, and in professions such as law, where income and social pressure facilitate drinking. The level of stress in a work environment may also contribute to risks for high alcohol intake. Unemployment also has been suggested as a causative factor for heavy drinking.

**Culture:** Social and cultural factors associated with increased risk of alcohol problems include permissive alcohol legislation such as lower age of legal drinking, greater availability of alcohol and greater socioeconomic deprivation. The acceptance or otherwise of drunken behaviour by societies shows great variation. These variations are culture-bound, but there are historical examples of cultures in which changes in the behaviours that are seen as acceptable have occurred over time.

It can be seen from the above discussion that alcohol use and abuse is best viewed through the framework of a multifactorial biopsychosocial model, which acknowledges the interplay of genetic, familial, physiological, psychological and social factors. Age, role, sex, social group and peer pressure, the family, community and occupational environment, as well as overall cultural values and controls on alcohol use, will act upon drinking behaviour. The individual’s genetic makeup, personality, sense of control and efficacy, degree of dependence, the presence of brain damage or psychiatric problems, reaction to internal and external cues or stimuli, financial state and the values of a treatment programme will all affect attempts to change drinking behaviour.

**Self Assessment Questions 2**

1) What is the most pertinent nutritional deficiency in alcohol abuse and dependence?

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2) Describe the features of Fetal Alcohol Syndrome.

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3) How does the family system model explain the etiology of alcoholism?

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1.7 ASSESSMENT OF ALCOHOL ABUSE AND DEPENDENCE

Assessment is not a one time phenomenon. This is carried out at various stages. Thus, the stages of assessment include:

a) Preintervention: where the purpose of assessment is to define the problem, formulate treatment, select an appropriate treatment from various modalities and motivate clients for treatment.

b) Intervention: here assessment is done to monitor progress.

c) Post intervention: assess maintenance and abstinence status.

Depending on the reasons for assessment and the settings in which the assessment is being carried out (inpatient v/s outpatient), there can be various levels of assessment. This can range from brief screening and basic assessment for diagnosis to specialized assessment for taking clinical decision regarding treatment and re-assessment for continuing care.

![Assessment Table]

(Rao. Mohan & Lal, 2005)

The key to appropriate management is a thorough history, proper physical examination, neuropsychiatric examination and relevant lab-investigation. Important aspects from the alcohol use misuse perspective are as follows:

**Phase 1 – Ask**

i) Ask all patients about alcohol and other substance misuse, including prescribed and over-the-counter medications.

Clinical indicators for screening include:

- Patients who are pregnant or trying to conceive.
- Patients who are likely to drink heavily, such as smokers, adolescents, and young adults.
- Patients who have health problems that might be alcohol induced, such as cardiac arrhythmia, dyspepsia, liver disease, depression or anxiety, insomnia, trauma.
- Patients have a chronic illness that isn’t responding to treatment as expected, such as chronic pain, diabetes, gastrointestinal disorders, depression, heart disease, hypertension.

ii) Differentiate between alcohol use, harmful use and dependence.

iii) Conceptualise assessment as ongoing and not necessarily “one-off” and record the information.

iv) Recognise that the manner and style in which this is done can be a powerful determinant of both the extent to which relevant information is elicited and
engagement with the therapeutic process. It’s often best to ask about alcohol consumption at the same time as other health behaviours such as smoking, diet, and exercise. Some clinicians have found that prefacing the alcohol questions with a non-threatening opener such as “Do you enjoy a drink now and then?” can encourage reserved patients to talk. In some situations, you may consider adding the questions “How often do you buy alcohol?” and “How much do you buy?” to help build an accurate estimate.

v) Be aware of, and sensitive to, the ambivalence alcohol-misusing patients may feel.

vi) Be nonjudgemental and act in a non-confrontational way.

**Phase 2 – Assess**

i) Assess the degree of dependence.

ii) Use the assessment process to educate patients about the effects of alcohol.

iii) Inform about withdrawal symptoms.

iv) Make some assessment of the level of motivation or “stage of change” at which the patient may be.

**Phase 3 – Advise**

i) Continue the assessment within a brief 5- to 10-minute “motivational interviewing” framework.

ii) Provide the patient with the opportunity to express anxieties and concerns.

iii) Offer personalised feedback about clinical findings, including physical examination and biochemical and haematological tests.

iv) Discuss and outline the personal benefits and risks of continued drinking and safe levels of drinking.

v) Provide self-help materials (e.g. manuals).

**Phase 4 – Assist**

i) Provide support and encouragement and instill positive expectations of success.

ii) Acknowledge that previous attempts may have engendered loss of confidence and self-esteem.

iii) Suggest that if the goal is abstinence, a “quit date” is set, so the patient can plan accordingly to rid of any alcohol in the house and safely (is it safe to stop drinking abruptly or not?). Certain conditions warrant advice to abstain as opposed to cutting down. These include when drinkers:

- are or may become pregnant
- are taking a contraindicated medication
- have a medical or psychiatric disorder caused by or exacerbated by drinking
- have an alcohol use disorder

If patients with alcohol use disorders are unwilling to commit to abstinence, they may be willing to cut down on their drinking. This should be encouraged while noting that abstinence, the safest strategy, has a greater chance of long-term success.

For heavy drinkers who don’t have an alcohol use disorder, use professional judgment to determine whether cutting down or abstaining is more appropriate, based on factors such as these:

- a family history of alcohol problems
Addictions

- advanced age
- injuries related to drinking
- symptoms such as sleep disorders or sexual dysfunction

It may be useful to discuss different options, such as cutting down to recommended limits or abstaining completely for perhaps a month or two, then reconsidering future drinking. If cutting down is the initial strategy but the patient is unable to stay within limits, recommend abstinence.

iv) Work through a range of alternative coping strategies, including the identification of cues that might help distract the patient.

Phase 5 – Arrange

Be prepared to refer or organise admission to a specialist or appropriate unit if the patient is,

- in severe withdrawal, including delirium tremens;
- experiencing unstable social circumstances;
- likely to develop serious withdrawal due from a severe degree of dependence or a previous episode of severe withdrawal, including delirium tremens;
- severely dependent;
- has a severe comorbid physical illness;
- has comorbid mental illness, including suicidal ideation;
- using multiple substances;
- has a history of frequent relapse.

During all phases, close attention should be paid to the appropriateness of various options for the particular individual – “tailor-made” where possible.

Various tools/scales are used to assess alcohol problems and determine their severity, such as Alcohol Dependence Scale (ADS), AUDIT (Alcohol Use Disorder Identification Test; Saunders et al., 1993), CAGE (Ewing, 1984), and Addiction Severity Index (5th Edition): ASI (McLellan, Luborsky, Woody, & O’Brien, 1980; McLellan et al., 1992).

1.8 TREATMENT OF ALCOHOL PROBLEMS

Alcohol abuse treatment occurs in a multitude of forms. It may be provided in outpatient or inpatient settings, be publicly or privately funded, and may or may not involve the administration of medication. The differences among the philosophies of, and the services provided in various drug abuse treatment programs may be enormous.

A key therapist responsibility is to help a client find a treatment approach and treatment setting that is effective for him or her, rather than slavishly adhering to a particular treatment model or setting. A second and equally important therapist responsibility is to enhance the client’s motivation to continue to try, even if the initial treatment setting is not effective.

Treatment planning must be multidimensional to recognize that there is more than one effective treatment for alcohol problems. Unlike certain disorders for which one treatment approach has demonstrable superiority over others; in the alcohol field there are a number of legitimate and empirically supported approaches to treatment. These treatments are based in different conceptualizations of the etiology, course, treatment goals, and length of treatment for alcohol problems.
Table 2: American Society of Addiction Medicine General Guidelines for Selection of Treatment Settings

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level I. Outpatient treatment</td>
<td>No serious risk for major withdrawal or withdrawal seizures</td>
</tr>
<tr>
<td></td>
<td>No acute or chronic medical or psychiatric problems that could interferewith treatment</td>
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<tr>
<td></td>
<td>Some openness to change</td>
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<tr>
<td></td>
<td>Some ability to maintain change</td>
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<tr>
<td></td>
<td>Reasonable environmental support for change</td>
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<tr>
<td>Level II. Intensive outpatient treatment</td>
<td>No serious risk for major withdrawal or withdrawal seizures</td>
</tr>
<tr>
<td></td>
<td>No acute or chronic medical or psychiatric problems that could be managed with intensive supervision and</td>
</tr>
<tr>
<td></td>
<td>Some reluctance to change or Limited ability to maintain change or Limited environmental supports for change</td>
</tr>
<tr>
<td>Level III. Medically monitored intensive inpatient treatment</td>
<td>At least two: Risk for withdrawal</td>
</tr>
<tr>
<td></td>
<td>Some level of acute or chronic medical or psychiatric problems that could be managed with intensive supervision</td>
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<tr>
<td></td>
<td>Reluctance to change</td>
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<tr>
<td></td>
<td>Limited ability to maintain change</td>
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<tr>
<td></td>
<td>Limited environmental supports for change</td>
</tr>
<tr>
<td>Level IV. Medically managed intensive inpatient treatment</td>
<td>Serious risk for major withdrawal or withdrawal seizures or</td>
</tr>
<tr>
<td></td>
<td>Acute or chronic medical or psychiatric problems that could interfere with treatment</td>
</tr>
</tbody>
</table>

(Ray & Mondal, 2005)

1.8.1 Psychological Approaches

Among the treatments with the best empirical support are:

1) **Brief Intervention:** Brief intervention is designed to be conducted by health professionals who do not specialize in addictions treatment. To identify the key ingredients of brief intervention, six elements were proposed summarized by the acronym FRAMES: feedback, responsibility, advice, menu of strategies, empathy, and self-efficacy. It is generally restricted to four or fewer sessions, each session lasting from a few minutes to 1 hour. It is most often used with adult and adolescent patients who are not alcohol dependent, and its goal may be moderate drinking rather than abstinence.
2) **Brief Strategic Family Therapy:** For many individuals with substance abuse disorders, interactions with their family of origin, as well as their current family, set the patterns and dynamics for their problems with substances. Furthermore, family member interactions with the substance abuser can either perpetuate and aggravate the problem or substantially assist in resolving it. Family therapy is particularly appropriate when the client exhibits signs that his substance abuse is strongly influenced by family members’ behaviours or communications with them.

- Family involvement is often critical to success in treating many substance abuse disorders—most obviously in cases where the family is part of the problem.
- Focus on the expectation of change within the family (which may involve multiple adjustments)
- Test new patterns of behaviour
- Teach how a family system works—how the family supports symptoms and maintains needed roles
- Elicit the strengths of every family member
- Explore the meaning of the substance abuse disorder within the family

BSFT is based on three basic principles:

i) BSFT is a family systems approach.

ii) The patterns of interaction in the family influence the behaviour of each family member.

iii) To plan interventions that carefully target and provide practical ways to change those patterns of interaction.

In BSFT, whenever possible, preserving the family is desirable. While family preservation is important, two goals must be set: to eliminate or reduce the adolescent’s use of drugs and associated problem behaviours, known as “symptom focus,” and to change the family interactions that are associated with the adolescent’s drug abuse, known as “system focus.” BSFT can be implemented in approximately 8 to 24 sessions. The number of sessions needed depends on the severity of the problem.

3) **Cognitive Behavioural Interventions:** Adapted from Marlatt and Gordon’s Relapse Prevention treatment for problem drinking, CBT strategies are based on the theory that learning processes play a role in the development of maladaptive behavioural patterns. Individuals learn to identify and correct problematic behaviours. CBT attempts to help patients recognize, avoid, and cope. That is, **RECOGNIZE** the situations in which they are most likely to use alcohol, **AVOID** these situations when appropriate, and **COPE** more effectively with a range of problems and problematic behaviours associated with alcohol abuse.

CBT has two critical components:

- Functional analysis: For each instance of use during treatment, the therapist and patient do a functional analysis, that is, they identify the patient’s thoughts, feelings, and circumstances before and after the alcohol use. Early in treatment, the functional analysis plays a critical role in helping the patient and therapist assess the
determinants, or high-risk situations, that are likely to lead to alcohol use and provides insights into some of the reasons the individual may be using alcohol (e.g., to cope with interpersonal difficulties, to experience risk or euphoria not otherwise available in the patient’s life). Later in treatment, functional analyses of episodes of alcohol use may identify those situations or states in which the individual still has difficulty coping.

Skills training: CBT can be thought of as a highly individualized training program that helps alcohol abusers unlearn old habits associated with abuse and learn or relearn healthier skills and habits. By the time the level of substance use is severe enough to warrant treatment, patients are likely to be using alcohol as their single means of coping with a wide range of interpersonal and intrapersonal problems. Because alcohol abusers typically come to treatment with a wide range of problems, skills training in CBT is made as broad as possible. The first few sessions focus on skills related to initial control of use (e.g., identification of high-risk situations, coping with thoughts about use). Once these basic skills are mastered, training is broadened to include a range of other problems with which the individual may have difficulty coping (e.g., social isolation, unemployment). In addition, to strengthen and broaden the individual’s range of coping styles, skills training focuses on both intrapersonal (e.g., coping with craving) and interpersonal (e.g., refusing offers of alcohol) skills. Patients are taught these skills as both specific strategies (applicable in the here and now to control alcohol use) and general strategies that can be applied to a variety of other problems. Thus, CBT is not only geared to helping each patient reduce and eliminate substance use while in treatment, but also to imparting skills that can benefit the patient long after treatment.

CBT has been offered in 12 to 16 sessions, usually over 12 weeks. An individual format is preferred for CBT because it allows for better tailoring of treatment to meet the needs of specific patients. However, a number of researchers and clinicians have emphasized the unique benefits of delivering treatment to substance users in the group format (e.g., universality, peer pressure).

4) **Community Reinforcement Approach:** CRA is an individual counseling approach originally developed for alcoholism that includes a Job Club, Marital Counseling, Social Skills/Relapse Prevention training and Disulfiram (Antabuse). Increasing abstinence is the primary goal. To achieve and maintain abstinence, patients need to make major lifestyle changes, particularly in four areas:

- **Family relationships**
- **Recreational activities**
- **Social networks**
- **Vocation**

High levels of satisfaction in an alcohol-free lifestyle are needed to compete with the reinforcement derived from drug use and the drug-using lifestyle. Therefore, increasing satisfaction in these areas is a major goal for reducing the probability of continuing or resuming use. Patients are assessed at intake in each of these areas, and individual treatment goals are developed by the therapist and patient together. Specific types of counseling and skills training are provided on an as-needed basis, depending on each patient’s lifestyle change goals and the skills needed to achieve those goals. Therapists are expected to facilitate achievement of targeted goals through extensive outreach whenever necessary.
5) **Contingency Management**: Contingency Management involves systematically reinforcing a client with a tangible good or service in exchange for a target behaviour, that may be abstinence from alcohol or limited use of it.

6) **Motivational Interviewing/Enhancement**: Motivational Enhancement Therapy (MET) seeks to evoke from clients their own motivation for change and to consolidate a personal decision and plan for change. The approach is largely client centered, although planned and directed. As applied to alcohol abuse, MET seeks to alter the harmful use of alcohol. Because each client sets his or her own goals, no absolute goal is imposed through MET, although counselors may advise specific goals such as complete abstinence. A broader range of life goals may be explored as well.

MET comprises techniques whereby the counselor responds to client denial and resistance by proposing thoughtful and detailed strategies that are designed to increase client readiness to change (CSAT 1999; Miller and Rollnick 2002; Prochaska and DiClemente 1984). The approach is based on the theory that clients being treated for substance use disorders go through five stages of change: precontemplation, contemplation, action, relapse, and maintenance. Client resistance to treatment indicates that the counselor may be attempting to move the client to the next stage too quickly.

MET is based on principles of cognitive and social psychology. The counselor seeks to develop a discrepancy in the client’s perceptions between current behaviour and significant personal goal; emphasis is placed on eliciting from clients self-motivational statements of desire for and commitment to change. The working assumption is that intrinsic motivation is a necessary and often sufficient factor in instigating change. MET is typically conducted as individual counseling, though family members may also be present and engaged. It is typically brief, limited to two to four sessions that each last 1 hour. MET may be insufficiently directive for clients who desire clear direction and advice.

7) **Solution-Focused Brief Therapy**: The Solution-Focused Model is a brief therapy approach developed over the past 20 years at the Brief Family Therapy Center in Milwaukee, WI. The approach was developed for low-income clients with serious alcohol or other drug problems. Because the model stresses that the problem and solution are not necessarily related, the type of drug is not seen as a critical factor in determining differential treatment. Primarily, the model is designed to help clients engage their own unique resources and strengths in solving the problems that bring them into treatment. Goals are the entire focus of the solution-focused brief therapy approach. The model uses a specialized interviewing procedure to negotiate treatment goals whose qualities facilitate efficient and effective treatment. Goals are the entire focus of this approach. The goals must be:

- Salient to the client rather than the therapist or treatment program.
- Small rather than large.
- Described in specific, concrete, and behavioural terms.
- Described in situational and contextual rather than global and psychological terms.
- Stated in interactional and interpersonal rather than individual and intrapsychic terms.
• Described as the start of something rather than the end of something.
• Described as the presence of something rather than the absence of something.
• Realistic and immediately achievable within the context of the client’s life.

The approach proposes that the solution(s) to the problems that a client brings into treatment may have little or nothing to do with those problems. This is particularly true in the treatment of problem drinking, where any of a variety of life experiences or actions on the client’s part, which have little to do with his or her use of alcohol, may result in a resolution of the problem. While the number of potential solutions is limitless, one example is a problem drinker who stops using problematically when he or she:

• Obtains employment.
• Ends or begins a relationship.
• Makes new friends.
• Relocates.

Treatment therefore need not make alcohol the primary focus to resolve the drinking problem. Rather, the focus returns to helping the client achieve the personal goals he or she sets.

8) **Supportive-Expressive Therapy**: Supportive-Expressive therapy (SE) is a short-term psychodynamic treatment. Its goal is to help patients gain understanding of conflictual relationship patterns. The main techniques include supportive techniques to bolster the therapeutic alliance and interpretations to help patients gain self-understanding. The therapy has two main components:

• Supportive techniques to help patients feel comfortable in discussing their personal experiences.
• Expressive techniques to help patients identify and work through interpersonal relationship issues.

Supportive-Expressive therapy (SE) also helps in alcohol dependence.

9) **Twelve-Step Facilitation**: TSF has been utilized in controlled outcome studies with alcohol abusers and alcoholics and with persons who have concurrent alcohol-cocaine abuse and dependency. It has been used with clients of diverse socioeconomic, educational, and cultural backgrounds and a range of maladjustment. It consists of a brief, structured, and manual-driven approach to facilitating early recovery from alcohol abuse/alcoholism and other drug abuse/addiction. TSF seeks to facilitate two general goals in individuals with alcohol or other drug problems: acceptance (of the need for abstinence from alcohol or other drug use) and surrender, or the willingness to participate actively in the 12-step fellowships as a means of sustaining sobriety. These goals are in turn broken down into a series of cognitive, emotional, relationship, behavioural, social, and spiritual objectives.

The theoretical rationale is based in the 12 steps and 12 traditions of AA and includes the need to accept that will power alone is not sufficient to achieve sustained sobriety, that self centeredness must be replaced by surrender to the group conscience, and that long-term recovery consists of a process of spiritual renewal.
The primary mechanism action is active participation and a willingness to accept a higher power as the locus of change in one’s life. It is intended to be implemented on an individual basis in 12 to 15 sessions and is based in behavioural, spiritual, and cognitive principles that form the core of 12-step fellowships such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA).

TSF was designed to be used in the context of short-term individual counseling but has been adapted for use in a group format. One part of TSF (the conjoint program) is specifically intended to be implemented through sessions with a significant other (SO). It is suitable for problem drinkers and other drug users and for those who are alcohol or other drug dependent.

10) Humanistic and Existential Therapies: Humanistic and existential psychotherapies use a wide range of approaches to the planning and treatment of substance abuse disorders. They are, however, united by an emphasis on understanding human experience and a focus on the client rather than the symptom. Humanistic and existential approaches share a belief that people have the capacity for self-awareness and choice. However, the two schools come to this belief through different theories. Humanistic and existential therapeutic approaches may be particularly appropriate for short-term substance abuse treatment because they tend to facilitate therapeutic rapport, increase self-awareness, focus on potential inner resources, and establish the client as the person responsible for recovery. Thus, clients may be more likely to see beyond the limitations of short-term treatment and envision recovery as a lifelong process of working to reach their full potential.

Humanistic and existential approaches can be used at all stages of recovery in creating a foundation of respect for clients and mutual acceptance of the significance of their experiences. There are, however, some therapeutic moments that lend themselves more readily to one or more specific approaches.

- **Client-centered** therapy can be used immediately to establish rapport and to clarify issues throughout the session.
- **Existential** therapy may be used most effectively when a client has access to emotional experiences or when obstacles must be overcome to facilitate a client’s entry into or continuation of recovery (e.g., to get someone who insists on remaining helpless to accept responsibility for her actions).
- **Narrative** therapy can be used to help the client conceptualize treatment as an opportunity to assume authorship and begin a “new chapter” in life.
- **Gestalt** approaches can be used throughout therapy to facilitate a genuine encounter with the therapist and the client’s own experience.
- **Transpersonal** therapy can enhance spiritual development by focusing on the intangible aspects of human experience and awareness of unrealized spiritual capacity.

Using a humanistic or existential therapy framework, the therapist can offer episodic treatment, with a treatment plan that focuses on the client’s tasks and experiences between sessions.

11) Group Therapy: Group psychotherapy is one of the most common modalities for treatment of substance abuse disorders. Group therapy is defined as a meeting of two or more people for a common therapeutic purpose or to achieve a common goal. It differs from family therapy in that the therapist creates open- and closed-
ended groups of people previously unknown to each other.

Group psychotherapy can be extremely beneficial to individuals with substance abuse problems. It gives them the opportunity to see the progression of abuse and dependency in themselves and others; it also provides an opportunity to experience personal success and the success of other group members in an atmosphere of support and hope. There are five models of group therapy that are effective for substance abuse treatment:

- **Psychoeducational Groups**: designed to educate clients about substance abuse and related behaviours and consequences. This type of group presents structured, group-specific content, often taught by means of videotapes, audiocassette, or lectures.

- **Skills Development Groups**: Skills development groups teach skills that help clients maintain abstinence, such as
  - Refusal skills
  - Social skills
  - Communication skills
  - Anger management skills
  - Parenting skills
  - Money management skills

- **Cognitive–Behavioural/Problem-Solving Groups**: work to change learned behaviour by changing thinking patterns, beliefs, and perceptions. The group leader focuses on providing a structured environment within which group members can examine the behaviours, thoughts, and beliefs that lead to their maladaptive behaviour.

- **Support Groups**: bolster members’ efforts to develop and strengthen their ability to manage their own thinking and emotions and to develop better interpersonal skills as they recover from substance abuse.

- **Interpersonal Process Groups**: use psychodynamics, or knowledge of the way people function psychologically, to promote change and healing. All therapists using a “process-oriented group therapy” model continually monitor three dynamics:
  - The psychological functioning of each group member (intrapsychic dynamics)
  - The way people are relating to one another in the group setting (interpersonal dynamics)
  - How the group as a whole is functioning (group as-a-whole dynamics)

**Multimodal Models of Treatment:**

1) **Minnesota Model**: The Minnesota Model approach is typically characterized by a thorough and ongoing assessment of all aspects of the client and of multimodal therapeutic approaches. It may include group and individual therapy, family education and support, and other methods.
A multidisciplinary team of professionals (e.g., counselors, psychologists, nurses) plan and assist in the treatment process for each client. The assumption is that abstinence is the prerequisite. Treatment provides tools and a context for the client to learn new ways of living without alcohol and other drugs. This type of treatment can be employed on an inpatient or outpatient basis. The primary goal is lifetime abstinence from alcohol and other mood-altering chemicals and improved quality of life. This goal is achieved by applying the principles of the 12-step philosophy, which include frequent meetings with other recovering people and changes in daily behaviours.

The ultimate goal is personality change or change in basic thinking, feeling, and acting in the world. This approach works by changing an addict’s beliefs about his or her relationship to others and to self. This changed perspective occurs by attending meetings, by self-reflection, and by learning new coping skills. Through this process, the client’s understanding about himself or herself in relationship to the self and to others is transformed.

Approximately 80 to 90 percent of the treatment occurs in groups; the remainder is in individual sessions. The ideal treatment setting is residential, as this environment most easily conveys dignity and respect for the individual and provides grounds and physical space for solitude and reflection. This model can, however, be applied in any setting.

The following individuals are well suited for this approach:

- Adolescents or adults who have transient intellectual impairment at most.
- People with average or better intellectual ability and at least sixth-grade reading ability.
- Alcoholics or polydrug users.
- People who are dually diagnosed if the psychiatric disorder is stable or not predominant in the clinical picture.

- People who have or develop at least moderate motivation and willingness to change. (Although many come to treatment with some resistance, most will be able to engage in the treatment process within 5 to 10 days. If they cannot, they may be discharged.)

Those not suited for this approach include the converse of the above, as well as individuals who are seeking methadone maintenance, those with poor reading ability or memory impairment, and those not motivated to change.

2) **Matrix Model:** The Matrix IOP method was developed initially in the 1980s in response to the growing numbers of individuals entering the treatment system with cocaine or methamphetamine dependence as their primary substance use disorder. Since then, it has also been adapted for treating the alcohol dependent population. The Matrix Model is a comprehensive, multi-format program that covers six key clinical areas:

- Individual/conjoint therapy
- Early recovery
- Relapse prevention
• Family education
• Social support
• Urine testing

It is an integrated therapeutic model incorporating:
• Cognitive behavioural
• Motivational enhancement
• Couples and family therapy
• Individual supportive/expressive psychotherapy and psychoeducation
• Twelve Step facilitation
• Group therapy and social support

The Matrix IOP approach provides a structured treatment experience for clients with alcohol use disorders. Clients receive information, assistance in structuring a substance-free lifestyle, and support to achieve and maintain abstinence from drugs and alcohol. The program specifically addresses the issues relevant to clients who are dependent on alcohol and their families.

For 16 weeks, clients attend several intensive outpatient treatment sessions per week. This intensive phase of treatment incorporates various counseling and support sessions:
• Individual/Conjoint family sessions (3 sessions)
• Early Recovery Skills group sessions (8 sessions)
• Relapse Prevention group sessions (32 sessions)
• Family Education group sessions (12 sessions)
• Social Support group sessions (36 sessions)

### 1.8.2 Pharmacotherapy

Although it is imperative that pharmacological treatment is administered safely, it is equally important to see it as one part of a phased treatment management process. In other words, “prescribing” is nested within the overall treatment package, which includes psychosocial components that have been negotiated, whether community or hospital based. Pharmacological treatments are usually reserved for patients who have dependence.

Which medication to use will depend on clinical judgment and patient preference. Each has a different mechanism of action. Some patients may respond better to one type of medication than another.

Three oral medications (naltrexone, acamprosate, and disulfiram) and one injectable medication (extended-release injectable naltrexone) are approved for treating alcohol dependence. They have been shown to help patients reduce drinking, avoid relapse to heavy drinking, achieve and maintain abstinence, or gain a combination of these effects. As is true in treating any chronic illness, addressing patient adherence systematically will maximize the effectiveness of these medications. Benzodiazepines has also been found to be effective.
## 1.8.3 Preventing Relapse

Addiction is a chronic disorder and the ultimate goal of long-term abstinence often requires sustained and repeated treatment episodes. Nearly all addicted individuals believe in the beginning that they can stop using drugs on their own, and most try to stop without treatment. However, most of these attempts result in failure to achieve long-term abstinence. Research shows that long-term drug use significantly changes brain function and these changes persist long after the individual stops using drugs. These drug-induced changes in brain function may have many behavioural consequences, including the compulsion to use drugs despite adverse consequences—the defining characteristic of addiction (Leshner, 1999).

The first 12 months of abstinence are especially difficult, and relapse is most common during this time. If patients do relapse, recognize that they have a chronic disorder that requires continuing care, just like asthma, hypertension, or diabetes. Recurrence of symptoms is common and similar across each of these disorders, perhaps because they require the patient to change health behaviours to maintain gains.

The most important principle is to stay engaged with the patient and to maintain optimism about eventual improvement. Most people with alcohol dependence who continue to work at recovery eventually achieve partial to full remission of symptoms, and often do so without specialized behavioural treatment. For patients who struggle to abstain or who relapse:

- If the patient is not taking medication for alcohol dependence, consider prescribing one and following up with medication management.
- Treat depression or anxiety disorders if they are present more than 2 to 4 weeks after abstinence is established.
- Assess and address other possible triggers for struggle or relapse, including stressful events, interpersonal conflict, insomnia, chronic pain, craving, or high-temptation situations such as a wedding or convention.
- If the patient is not attending a mutual help group or is not receiving behavioural therapy, consider recommending these support measures.
- Encourage those who have relapsed by noting that relapse is common and pointing out the value of the recovery that was achieved.
- Provide follow-up care and advise patients to contact you if they are concerned about relapse.

### Psychological/ Psychotherapeutic Strategies

Several models have been proposed to conceptualize the maintenance or relapse process, with associated treatments. The most prominent maintenance models include Marlatt and Gordon’s (1985) relapse prevention (RP) model, the CENAPS® Model of Relapse Prevention Therapy (CMRPT®) and the disease model, best exemplified by the practices common to Alcoholics Anonymous.

**RP Model (Marlatt & Gordon):** The RP model is an extension of the functional-analytic model and focuses on the interplay among environment, coping skills, and cognitive and affective responses in maintaining successful change. In the RP model, relapse occurs in response to a high risk situation for which the client either lacks or does not apply effective coping skills. Low self-efficacy for coping with the situation may contribute
to the difficulties. If the client does not cope effectively, use of alcohol is likely. Following initial drinking, Marlatt and Gordon suggested that a cognitive factor, the “abstinence violation effect” (AVE), is activated. The AVE represents all-or-nothing thinking; after drinking, the client makes a cognitive shift to viewing him- or herself as “drinking”; therefore, he or she continues to drink. RP treatment focuses on several points of intervention common to cognitive-behavioural treatment, such as identification of high-risk situation and acquisition of coping skills, as well as cognitive restructuring to help the client view a drinking episode as a “lapse” from which the client can learn and return to abstinence rather than a “relapse” into previous drinking patterns.

RP also focuses on lifestyle changes to decrease the presence of high-risk situations, and encourages development of a balance between pleasures and desires, and obligations and responsibilities (a “want–should” balance) in the client’s life. In his more recent work, Marlatt (Marlatt & Donovan, 2005; Witkiewitz & Marlatt, 2004) has described relapse as “multidimensional and dynamic” (Marlatt & Donovan, 2005), and considers the influence of longer-term risk factors such as family history and social supports, as well as more proximal influences on relapse. He also suggests that there are reciprocal interactions among cognitions, coping skills, affect and drinking.

The CENAPS® Model of Relapse Prevention Therapy (Terence Gorski):
CMRPT is a comprehensive method for preventing chemically dependent clients from returning to alcohol and other drug use after initial treatment and for early intervention should chemical use occur. It is a clinical procedure that integrates the disease model of chemical addiction and abstinence-based counseling methods with recent advances in cognitive, affective, behavioural, and social therapies. The method is designed to be delivered across levels of care with a primary focus on outpatient delivery systems. The CMRPT consists of five primary components:

1) Assessment.
2) Warning sign identification.
3) Warning sign management.
4) Recovery planning.
5) Relapse early intervention training.

Cognitive, affective, and behavioural therapy principles are targeted to accomplish the specific goals of each CMRPT component. The CMRPT incorporates standard and structured group and individual therapy sessions and psychoeducational (PE) programs that focus primarily on these five primary goals. The treatment is holistic in nature and involves clients in a structured program of recovery activities. Willingness to comply with the recovery structure and actively participate within the structured sessions is a major factor in accepting clients for treatment with this model.

This model is also similar to and has been heavily influenced by the Cognitive-Behavioural Relapse Prevention Model developed by Marlatt and Gordon (George 1989; Marlatt and Gordon 1985). The major difference is that the CMRPT integrates abstinence-based treatment and has greater compatibility with 12-step programs than the Marlatt and Gordon model.

Clients who do well with the CMRPT have average or above-average conceptual skills and eighth grade or better reading and writing skills but no learning disabilities, severe cognitive impairments, active impulse control disorders, or other diagnosis that interferes with the ability to participate in a structured cognitive-behavioural therapy program. In addition, they have been detoxified.
Pharmacological Strategies

Medicines like acamprosate, naltrexone and disulfiram are used; however, there are conditions in which these should be used. Selective Serotonin Reuptake Inhibitors (SSRIs) may also be considered under specified conditions.

Management of Dual Disorders

Dual disorders recovery counseling (DDRC) is an integrated approach to treatment of patients with alcohol use disorders and comorbid psychiatric disorders. The DDRC model, which integrates individual and group addiction counseling approaches with psychiatric interventions, attempts to balance the focus of treatment so that both the patient’s addiction and psychiatric issues are addressed.

The DDRC model is based on the assumption that there are several treatment phases that patients may go through. These phases are rough guidelines delineating some typical issues patients deal with and include:

Phase 1—Engagement and Stabilization. Patients are persuaded, motivated, or involuntarily committed to treatment. The main goal of this phase is to help stabilize the acute symptoms of the psychiatric illness and/or the drug use disorder. Another important goal is to motivate patients to continue in treatment once the acute crisis is stabilized or the involuntary commitment expires.

Phase 2—Early Recovery. This phase involves learning to cope with desires to use chemicals; avoiding or coping with people, places, and things that represent high-risk addiction relapse factors; learning to cope with psychiatric symptoms; getting involved in support groups, such as Alcoholics Anonymous (AA) getting the family involved (if indicated); beginning to build structure into life; and identifying problems to work on in recovery. This phase roughly involves the first 3 months following stabilization.

Phase 3—Middle Recovery. In this phase, patients continue working on issues from the previous phase as needed. In addition, patients learn to develop or improve coping skills to deal with intrapersonal and interpersonal issues. This phase also focuses on helping patients cope with persistent symptoms of psychiatric illness; drug use lapses, relapses, or setbacks; and crises related to the psychiatric disorder. Patients are usually not tapered off medications until they have several months or longer of significant improvement in psychiatric symptomology.

Phase 4—Late Recovery. This phase, also referred to as the “maintenance phase” of recovery, involves continued work on issues addressed in the middle phase of recovery and work on other clinical issues that emerge. Important intrapersonal or interpersonal issues may be explored in greater depth during this phase for patients who have continued abstinence and remained relatively free of major psychiatric symptoms. Many patients with chronic or persistent forms of psychiatric illness (e.g., schizophrenia, bipolar disease, recurrent major depression), or severe personality disorders such as borderline personality disorder, or severe personality disorders such as borderline personality disorder, often continue active involvement in treatment. Treatment during this phase may involve maintenance pharmacotherapy, supportive DDRC counseling, or some specific form of psychotherapy (e.g., interpersonal psychotherapy). Involvement in support groups continues during this phase of recovery as well.

The DDRC approach can be adapted for virtually any type of addiction, mental health disorder, or combination of dual disorders. However, it is best suited for mood, anxiety, schizophrenic, personality, adjustment, and other addictive disorders, in combination with alcohol or other drug addiction.
Clients with mental retardation, organic brain syndromes, head injuries, and more severe forms of thought disorders are less suited for this counseling approach.

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<td>1) What are the stages of assessment of alcohol abuse and dependence?</td>
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<td>2) Mention the principles of Brief Strategic Family Therapy (BSFT).</td>
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<td>3) What is psychoeducational group?</td>
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<td>4) Describe the treatment phases as per the Dual disorders recovery counseling (DDRC) model.</td>
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1.9 LET US SUM UP

The alcohol related disorders exact an immense toll on the mental and physical well-being of many individuals. Consequently, they jeopardize the integrity of the family and other social forces represented by the healthcare system, the law, and the economy. Because of the prevalence of alcohol related disorders, and because they can masquerade as diverse medical and other psychiatric disorders, their recognition and initial treatment are relevant to all physicians, in particular, the mental health professional. Alcohol-related disorders are heterogeneous in terms of the interactions between the manifest psychopathology of the individual patient and the psychopharmacologic actions of a given drug, within the relevant sociocultural context. This perspective is useful in seeking an etiologic understanding of these disorders, conducting a clinical assessment, planning for the initial treatment of the direct consequences of alcohol use and developing and implementing a comprehensive treatment strategy for patients.
1.10 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) The primary elements of addictive disease are, compulsive use, loss of control, and continued use despite adverse consequences.

2) Type 1 alcoholism is characterized by:
   - Age of onset over 25 years
   - No criminality or treatment for alcohol problems in the biological parents
   - Loss of control (or psychological dependence)
   - Guilt and fear about dependence
   - Harm avoidance
   - Reward dependence

Type 2 alcoholism is characterized by:
   - Teenage age of onset (under 25 years)
   - Alcohol abuse, criminality and treatment are extensive in the biological father
   - Inability to abstain
   - Aggressive behaviour
   - Novelty-seeking personality traits

3) True

Self Assessment Questions 2

1) The most pertinent nutritional deficiency in alcohol abuse and dependence is the Wernicke-Korsakoff syndrome (WKS), which results from thiamine deficiency.

2) The features of Fetal Alcohol Syndrome (FAS) are as follows: children with FAS have reduced body weight and height, are hyperactive and have subnormal intelligence. Their faces may be recognized by short palpebral fissures, short upturned noses, mid facial hypoplasia, low nasal bridge and a thin upper lip.

3) In the family systems model, the etiology of alcoholism is focused on the behaviour of family members around drinking, with particular attention paid to the family of origin and the role of the spouse/partner.

Self Assessment Questions 3

1) The stages of assessment are,
   a) Pre intervention: where the purpose of assessment is to define the problem, formulate treatment, select an appropriate treatment from various modalities and motivate clients for treatment.
   b) Intervention: here assessment is done to monitor progress
   c) Post intervention: assess maintenance and abstinence status
2) BSFT is based on three basic principles:
   i) That BSFT is a family systems approach.
   ii) That the patterns of interaction in the family influence the behaviour of each family member.
   iii) To plan interventions that carefully target and provide practical ways to change those patterns of interaction.

3) Psychoeducational Groups refer to groups designed to educate clients about substance abuse and related behaviours and consequences. This type of group presents structured, group-specific content, often taught by means of videotapes, audiocassette, or lectures.

4) The treatment phases as per the Dual disorders recovery counseling (DDRC) model are as follows: Engagement & stabilization, Early recovery, Middle recovery, and Late recovery.

### 1.11 UNIT END QUESTIONS

1) Differentiate between addiction and dependence.
2) What are the clinical features of alcohol withdrawal syndromes?
3) Describe causes of alcohol dependence.
4) Discuss the consequences of alcohol abuse and dependence.
5) Explain alcoholism from behavioural theory perspective.
6) Discuss the various psychological approaches for the management of alcohol dependence.
7) Explain humanistic and existential therapies for management of alcohol dependence.
8) Explain Matrix model of treatment of alcohol dependence.

### 1.12 SUGGESTED READINGS AND REFERENCES


Kendler KS, Schmitt E, Aggen SH, Prescott CA (2008) Genetic and environmental influences on alcohol, caffeine, cannabis, and nicotine use from early adolescence to middle adulthood. Arch Gen Psychiatry 65:674–682


UNIT 2 SUBSTANCE ABUSE AND ADDICTION

Structure

2.0 Introduction
2.1 Objectives
2.2 Substance Abuse Disorders
2.3 Illegal Drugs
   2.3.1 Opioids
   2.3.2 Depressants
   2.3.3 Stimulants
   2.3.4 Hallucinogens
   2.3.5 Other Drugs
2.4 Assessment of the Drug User
2.5 Treatment and Management of Substance Abuse and Addictions
2.6 Let Us Sum Up
2.7 Answers to Self Assessment Questions
2.8 Unit End Questions
2.9 Suggested Readings and References

2.0 INTRODUCTION

Substance abuse and addictions result from the misuse of harmful or addictive substances which include, alcohol, illegal or street drugs, prescription and over-the-counter medicines, and volatile chemicals.

The resultant problems include both mental and physical illnesses, and family, housing, employment, and legal difficulties. Treatment of substance abuse disorders is complex and challenging as the reason for substance abuse and addiction is unique for each abuser. Further, the family environment and situation of each abuser is unique. Treatment and management of substance abuse need to take into account all these. Both psychological and pharmacological interventions are used that may include detoxification and substitute prescribing.

The use and misuse of drugs is increasing and affecting our children, youth, men and women, and the elderly also. In this Unit, you will learn about the substance abuse disorder, various drugs used, and the assessment and treatment of substance abuse.

2.1 OBJECTIVES

By the end of this Unit, you will be able to:
- explain the concept of substance abuse disorders;
- know the most commonly used illegal drugs;
- describe the signs and symptoms in the different types of substance intoxication and withdrawal states;
explain the assessment of a person with substance abuse disorders; and

- discuss the management and treatment of persons with substance abuse disorders.

## 2.2 SUBSTANCE ABUSE DISORDERS

A formal definition of substance abuse disorder, based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR), is as follows:

Drug abuse is a maladaptive pattern of drug use leading to clinically significant impairment or distress, as manifested by one or more of four symptoms or criteria in a 12-month period.

- Recurrent drug use may result in *a. failure to fulfill major role obligations* at work, school, or home. Repeated absences, tardiness, poor performance, suspensions, or neglect of duties in major life domains suggests that use has crossed over into abuse.

- Recurrent drug use in situations in which it is *physically hazardous* is a sign of abuse. Operating machinery, driving a car, swimming, or walking in a dangerous area while under the influence indicates drug abuse.

- Recurrent drug-related *legal problems*, such as arrests for disorderly conduct or DUI [driving under the influence] arrests, are indicative of abuse.

- Recurrent use, despite having persistent or recurrent *social or interpersonal problems* caused or exacerbated by the effects of the drug, is indicative of abuse. For example, getting into arguments or fights with others, passing out at others’ houses, or acting inappropriately in front of others (which is disapproved of) is indicative of abuse.

In summary, drug use that leads to decrement in performance of major life roles, dangerous action, legal problems, or social problems indicates a substance abuse disorder.

Alternatively, a diagnosis of substance dependence, a more severe disorder, subsumes a diagnosis of substance abuse. There are seven other criteria that, if met, constitute substance dependence.

The criteria for substance dependence, provided by the *DSM-IV-TR*, include a maladaptive pattern of drug use leading to clinically significant impairment or distress, as manifested by three or more of the following seven symptoms occurring in the same 12-month period.

- **Tolerance is experienced.** Tolerance entails a need for markedly increased amounts of a drug to achieve the desired drug effect or a markedly diminished effect with continued use of the same amount of the drug.

- **Withdrawal is experienced.** Either a characteristic withdrawal syndrome occurs when one terminates using the drug, or the same or a similar drug is taken to relieve or avoid the syndrome.

- **Larger amounts of the drug are taken over a longer period** than was intended. For example, an alcohol-dependent individual may intend to drink only two drinks on a given evening but ends up having 15 drinks, or to “party” over the weekend but the party lasts for 2 weeks until there is no more money for alcohol.

- **There exists a persistent desire or unsuccessful effort to cut down or control drug use.** For example, a drug-dependent individual may decide to control his or
her use but ends up abstaining on some evenings and using in excess on other evenings.

- **A great deal of time is spent on activities needed to obtain the drug, use the drug, or recover from its effects.** For example, a person may travel long distances or search all day to obtain cocaine, use the drug that night, and miss work the next day to recover and catch some rest. In this scenario, 2 days were spent for 1 night of “getting high.”

- **Important social, occupational, or recreational activities are given up or reduced because of drug use.** For example, the drug abuser may be very high, passed out, or hung over much of the time and thus may not spend time with family and friends like he or she did before becoming dependent.

- **Drug use continues despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or worsened by the drug.** For example, someone who becomes paranoid after continued methamphetamine use and is hospitalized but continues to use it after release from the hospital exhibits this symptom.

Alternatively, the 10th revision of the *International Statistical Classification of Diseases and Related Health Problems (ICD-IO)* provides eight classifications of consequences from the use of a substance in its section on mental and behavioural disorders due to psychoactive substance use (Chapter 5; F10-F19). The *ICD-IO* definition focuses more on the mental or physical health complications and not social, legal, or environmentally hazardous consequences of abuse, as does the *DSM-IV-TR*.

Let us know a few terms that we come across while discussing about substance abuse and addiction.

a) **Acute intoxication**

The pattern of reversible physical and mental abnormalities caused by the direct effects of the substance. These are specific and characteristic for each substance. Most substances have both pleasurable and unpleasant acute effects; for some, the balance of positive and negative effects is situation-, dose- and route-dependent.

b) **At-risk use**

A pattern of substance use where the person is at increased risk of harming their physical or mental health. This is not a discrete point but shades into both normal consumption and harmful use. At-risk use depends not only on absolute amounts taken but the situations and associated behaviours.

c) **Harmful use**

The continuation of substance use despite evidence of damage to the user’s physical or mental health or to their social, occupational, and familial well-being. This damage may be denied or minimised by the individual concerned.

d) **Withdrawal**

Where there is physical dependence on a drug, abstinence will generally lead to features of withdrawal. These are characteristic for each drug. Some drugs are not associated with any withdrawals; some with mild symptoms only; and some with significant withdrawal syndromes. Clinically significant withdrawals are recognised in dependence on alcohol, opiates, nicotine, benzodiazepines, amphetamines, and cocaine. Symptoms of withdrawal are often the opposite of the acute effects of the drug.
Complicated withdrawal
Withdrawals can be simple, as above or complicated by the development of seizures, delirium, or psychotic features.

Substance-induced psychotic disorder
Illness characterised by hallucinations and/or delusions occurring as a direct result of substance-induced neurotoxicity. Psychotic features may occur during intoxication and withdrawal states, or develop on a background of harmful or dependent use. There may be diagnostic confusion between these patients and those with primary psychotic illness and comorbid substance misuse. Substance-induced illnesses will be associated in time with episodes of substance misuse and may have atypical clinical features, (e.g. late first presentation with psychosis, prominence of non-auditory hallucinations).

Cognitive impairment syndromes
Reversible cognitive deficits occur during intoxication. Persisting impairment (in some cases amounting to dementia) caused by chronic substance use is recognised for alcohol, volatile chemicals, benzodiazepines, and, debatably, cannabis. Cognitive impairment is associated with heavy chronic harmful use/dependence and shows gradual deterioration with continued use and either a halt in the rate of decline or gradual improvement on abstinence.

Residual disorders
Several conditions exist (e.g. alcoholic hallucinosis; persisting drug-induced psychosis; LSD flashbacks, where there are continuing symptoms despite continuing abstinence from the drug.

Exacerbation of pre-existing disorder
All other psychiatric illnesses, especially anxiety and panic disorders, mood disorders, and psychotic illnesses may be associated with comorbid substance use. Although this may result in exacerbation of the patient’s symptoms and a decline in treatment effectiveness, it can be understood as a desire to self-medicate (e.g. alcohol taken as a hypnotic in depressive illness) or escape unpleasant symptoms. Sometimes there is debate about whether there is, for example, a primary mood disorder with secondary alcohol use or vice versa. Careful examination of the time course of the illness may reveal the answer. In any case, it is advisable to address substance misuse problems first as this may produce secondary mood improvements and continuing substance misuse will limit antidepressant treatment effectiveness.

The Dependence syndrome
Dependence includes both physical dependence (the physical adaptations to chronic, regular use) and psychological dependence (the behavioural adaptations). In some drugs (e.g. hallucinogens), no physical dependence features are seen.

This is a clinical syndrome describing the features of substance dependence. These features form the core of both ICD-10 and DSM-IV descriptions of substance dependence.

- Primacy of drug-seeking behaviour: The drug and the need to obtain it become the most important things in the person’s life, taking priority over all other activities and interests. Thus drug use becomes more important than retaining job or relationships, remaining financially solvent, and in good physical health and may diminish moral sense leading to criminal activity and fraud. If the person rates drug use above health, then stern warnings about impending illness are likely to mean little.
Narrowing of the drug-taking repertoire: The user moves from a range of drugs to a single drug taken in preference to all others. The setting of drug use, the route of use, and the individuals with whom the drug is taken may also become stereotyped.

Increased tolerance to the effects of the drug: The user finds that more of the drug must be taken to achieve the same effects. They may also attempt to combat increasing tolerance by choosing a more rapidly acting route of administration, (e.g. IV rather than smoked), or by choosing a more rapidly acting form, (e.g. freebase cocaine rather than cocaine hydrochloride). In advanced dependence there may be a sudden loss of previous tolerance; the mechanism for this is unknown. Clinically, tolerance is exhibited by individuals who are able to display no or few signs of intoxication while at a blood level in which intoxication would be evident in a non-dependent individual.

Loss of control of consumption: A subjective sense of inability to restrict further consumption once the drug is taken.

Signs of withdrawal on attempted abstinence: A withdrawal syndrome, characteristic for each drug, may develop. This may be only regularly experienced in the mornings because at all other times the blood level is kept above the required level.

Drug taking to avoid development of withdrawal symptoms: The user learns to anticipate and avoid withdrawals, (e.g. having the drug available on wakening).

Continued drug use despite negative consequences: The user persists in drug use even when threatened with significant losses as a direct consequence of continued use, (e.g. marital break-up, prison term, loss of job).

Rapid reinstatement of previous pattern of drug use after abstinence: Characteristically, when the user relapses to drug use after a period of abstinence, they are at risk of a return to the dependent pattern in a much shorter period than the time initially taken to reach dependent use.

Concept of Addiction

Addiction is a disease characterised by compulsion, loss of control, and continued use in spite of adverse consequences (Coombs, 1997; Smith & Seymour, 2001). The primary elements of addictive disease are three Cs:

1) **Compulsive use**: an irresistible impulse; repetitive ritualized acts and intrusive, ego-dystonic (i.e., ego alien) thoughts e.g. the person cannot start the day without a cigarette and/or a cup of coffee. Evening means a ritual martini, or two, or three. In and of itself, however, compulsive use doesn’t automatically mean addiction.

2) **Loss of control**: the inability to limit or resist inner urges; once begun it is very difficult to quit, if not impossible, without outside help. This is the pivotal point in addiction. The individual swears that there will be no more episodes, that he or she will go to the party and have two beers. Instead, the person drinks until he or she experiences a blackout and swears the next morning to never do it again; only to repeat the behaviour the following night. The individual may be able to stop for a period of time, or control use for a period of time, but will always return to compulsive, out-of-control use.

3) **Continued use despite adverse consequences**: use of the substance continues in spite of increasing problems that may include declining health, such as liver impairment in the alcohol addict; embarrassment, humiliation, shame; or increasing family, financial, and legal problems.
Drug addiction refers to a situation where drug procurement and administration appear to govern the individual’s behaviour, and where the drug seems to dominate the individual’s motivational hierarchy. Jaffe (1975) has described addiction as “a behavioural pattern of compulsive drug use, characterized by overwhelming involvement with the use of a drug, the securing of its supply, and a high tendency to relapse after withdrawal (abstinence).” This definition follows the general lexical usage of the term and is consistent with the word’s etymology (Bozarth 1987).

Drug addiction is defined behaviourally. It carries no connotations regarding the drug’s potential adverse effects, the social acceptability of drug usage, or the physiological consequences of chronic drug administration (Jaffe 1975). This latter point is especially important because some investigators have mistakenly used the term addiction to describe the development of physical dependence (see Bozarth 1987a, 1989; Jaffe 1975). Although drug addiction frequently has adverse medical consequences, it is usually associated with strong social disapproval, and it is sometimes accompanied by the development of physical dependence, these factors do not define addiction nor are they invariably associated with it. Drug addiction is an extreme case of compulsive drug use associated with strong motivational effects of the drug.

Substance dependence is the term which formally replaced ‘addiction’ in medical terminology in 1964 when the World Health Organizations Expert Committee on Drug Abuse proposed that the terms addiction and habituation be replaced with the term dependence and distinguished between two types—psychological dependence and physical dependence. Psychological dependence refers to “the experience of impaired control over drug use” while physical dependence involves “the development of tolerance and withdrawal symptoms upon cessation of use of the drug, as a consequence of the body’s adaptation to the continued presence of a drug event” (UNIDCP, 1998).

Researchers and clinicians traditionally limit ‘addiction’ to alcohol and other drugs. Yet, neuroadaptation, the technical term for the biological processes of tolerance and withdrawal, also occurs when substance-free individuals become addicted to pathological gambling, pornography, eating, overwork, shopping, and other compulsive excesses.

Acquisition and Maintenance Phases of Addiction

Drug addiction is frequently divided into two phases—acquisition and maintenance. This conceptual partition acknowledges that different factors may be involved in these two phases and that different degrees of drug-taking behaviour are associated with these phases. The progression from the acquisition phase to the maintenance phase of addiction is not a quantal change, but rather it represents a shift in the importance of various factors that control the individual’s behaviour along with an increase in the motivational strength of the drug-taking behaviour.

- Prior to the first experience with a drug, the direct rewarding effects of drug administration are largely irrelevant in governing the individual’s behaviour,
• except of course in that expectancies are developed from social interactions (e.g., media exposure, conversations with experienced users).
• Initiation of drug-taking behaviour is governed by intrapersonal and sociological variables such as curiosity about the drug’s effects or peer pressure to try the drug.
• After initial exposure to the drug, pharmacological variables are relevant and will influence subsequent drug-taking behaviour.
• Intrapersonal and sociological factors are probably still important in determining continued drug use, but they are less significant as the potent rewarding effects are repeatedly experienced.
• At some point there is a shift in control from intrapersonal/sociological to pharmacological factors in governing drug-taking behaviour. This is concomitant with a marked increase in the motivational strength of the drug and with a progression from casual to compulsive drug use and ultimately to drug addiction. This may occur very rapidly for some drugs such as heroin or free-base cocaine and much more slowly for other drugs such as alcohol.

The division of addiction into two separate phases does not presume that different mechanisms are involved in each phase. Rather, the demarcation acknowledges the possibility of different mechanisms but more importantly emphasizes differences in the motivational strength between the acquisition and maintenance of addictive behaviour. The same psychobiological process underlies both phases but additional variables are important in the acquisition of addiction. These other variables lose much of their influence as the addiction fully develops and as it becomes increasingly under control of basic pharmacological mechanisms.
Self Assessment Questions 1

1) What is tolerance of drugs?
....................................................................................................................
....................................................................................................................
....................................................................................................................

2) What is harmful use of substances?
....................................................................................................................
....................................................................................................................
....................................................................................................................

3) Drug addiction is frequently divided into two phases such as ________ and
____________.

2.3 ILLEGAL DRUGS

A study of 300 street child laborers in slums of Surat in 1993 (Bansal & Banerjee) showed that 135 (45%) used substances. The substances used were smoking tobacco, followed by chewable tobacco, snuff, cannabis and opioids. Injecting drug use (Tripathi & Lal, 1999) is also becoming apparent among street children as are inhalants (Prahara, Kumar, Verma & Arora, 2008).

There are serious sexually transmitted disease risks, including HIV that women partners and drug users face (Murthy, 2008; Kumar & Sharma, 2008).

The Global Youth Tobacco Survey (Sinha et al.) in 2006 showed that 3.8% of students smoke and 11.9% currently used smokeless tobacco.

There are as many patterns of drug use as drug user and individual patient assessment is mandatory; nonetheless a number of patterns of use of illegal drugs can be recognised:

- Experimental use: Use of drug in order to explore effects. Common among young and heavily driven by drug availability and drug use among peers. Very common for softer drugs, (e.g. cannabis, volatile chemicals), rarer for more hard drugs, (e.g. heroin).
- Situational use: Drug use limited to certain situations, (e.g. parties, raves). Mainly drugs with stimulant/hallucinogenic properties.
- Recreational use: Regular but non-dependent use. May be limited in time by period of life (e.g. ending at the end of university life) or may progress to dependent use.
- Polydrug use: Non-dependent use of variety of drugs. One drug may be taken to potentiate the effects of another or to manage unpleasant after effects of drug use. Risks can be additive or multiplicative.
- Dependent use: Use of a drug for which a dependence syndrome has developed. Continued use may be motivated more by the desire to avoid withdrawals than by positive drug effects which may have diminished due to the development of tolerance. Tendency is for the use of the dependent drug to predominate, with other drugs being taken only if the primary drug is unavailable.
- Dual diagnosis use: Drug users who also suffer from a major mental illness. An important group for therapeutic intervention.
Categories of drugs of abuse

- Opiates e.g., heroin, dihydrocodeine, methadone, codeine, buprenorphine, pethidine.
- Depressants e.g., benzodiazipines, barbiturates, alcohol, GHB.
- Stimulants e.g., amphetamine, cocaine, MDMA.
- Hallucinogens e.g., LSD, PCP, mushrooms, ketamine.
- Others e.g., cannabis, volatile substances, anabolic steroids.

Table 1: COMMONLY ABUSED DRUGS

<table>
<thead>
<tr>
<th>Substances: Category and Name</th>
<th>Commercial and Street Names</th>
<th>How Administered</th>
<th>Intoxication Effects / Potential Health Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cannabinoids</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hashish</td>
<td>boom, chronic, gangster, hash, hash oil, hemp</td>
<td>I/swallowed, smoked</td>
<td>euphoria, slowed thinking and reaction time, confusion, impaired balance and coordination / cough, frequent respiratory infections; impaired memory and learning; increased heart rate, anxiety, panic attacks; tolerance</td>
</tr>
<tr>
<td>Marijuana</td>
<td>blunt, dope, ganja, grass, herb, joints, Mary Jane, pot, reefer, sinsemilla, skunk, weed</td>
<td>I/swallowed, smoked</td>
<td></td>
</tr>
<tr>
<td><strong>Depressants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barbiturates</td>
<td>Ativan, Halcion, Librium, Valium, Xanax: candy, downers, sleeping pills, tranks</td>
<td>injected, swallowed</td>
<td>reduced anxiety; feeling of well-being; lowered inhibitions; slowed pulse and breathing; lowered blood pressure; poor concentration / fatigue; confusion; impaired coordination, memory, judgment</td>
</tr>
<tr>
<td>benzodiazepines (other than flunitrazepam)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>flunitrazepam</td>
<td>Rohypnol: forget-me pill, Mexican Valium, R2, Roche, roofies, roofinol, rope, rophies</td>
<td>swallowed, snorted</td>
<td>sedation, drowsiness / dizziness</td>
</tr>
<tr>
<td>GHB</td>
<td>gamma-hydroxybutyrate: G, Georgia home boy, grievous bodily harm, liquid ecstasy</td>
<td>swallowed</td>
<td>visual and gastrointestinal disturbances, urinary retention, memory loss for the time under the drug’s effects</td>
</tr>
<tr>
<td>methaqualone</td>
<td>Quaalude, Sopor, Parest: ludes, mandrex, quad, quay</td>
<td>injected, swallowed</td>
<td>drowsiness, nausea / vomiting, headache, loss of consciousness, loss of reflexes, seizures, coma, death</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>euphoria / depression, poor reflexes, slurred speech, coma</td>
</tr>
</tbody>
</table>
### DISSOCIATIVE ANESTHETICS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Common Names</th>
<th>Routes of Administration</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ketamine</td>
<td>cat Valiums, K, Special K, vitamin K</td>
<td>Injected, snorted, smoked</td>
<td>Increased heart rate and blood pressure, impaired motor function / memory loss; numbness; nausea / vomiting</td>
</tr>
<tr>
<td>PCP and analogs</td>
<td>angel dust, boat, hog, love boat, peace pill</td>
<td>Injected, swallowed, smoked</td>
<td>At high doses, delirium, depression, respiratory depression and arrest</td>
</tr>
<tr>
<td>Phencyclidine (PCP)</td>
<td>angel dust, boat, hog, love boat, peace pill</td>
<td>Injected, swallowed, smoked</td>
<td>Possible decrease in blood pressure and heart rate, panic, aggression, violence / loss of appetite, depression</td>
</tr>
</tbody>
</table>

### HALLUCINOGENS

<table>
<thead>
<tr>
<th>Substance</th>
<th>Common Names</th>
<th>Routes of Administration</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSD</td>
<td>lysergic acid diethylamide</td>
<td>Swallowed, absorbed through mouth tissues</td>
<td>Altered states of perception and feeling; nausea; persisting perception disorder (flashbacks)</td>
</tr>
<tr>
<td>Mescaline</td>
<td>buttons, cactus, mesc, peyote</td>
<td>Swallowed, smoked</td>
<td>Increased body temperature, heart rate, blood pressure; loss of appetite, sleeplessness, numbness, weakness, tremors</td>
</tr>
<tr>
<td>Psilocybin</td>
<td>magic mushroom, purple passion, shrooms</td>
<td>Swallowed</td>
<td>Persistent mental disorders</td>
</tr>
</tbody>
</table>

### OPIODS & MORPHINE DERIVATIVES

<table>
<thead>
<tr>
<th>Substance</th>
<th>Common Names</th>
<th>Routes of Administration</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>Empirin with Codeine, Fiorinal with Codeine, Robitussin A-C, Tylenol with Codeine: Captain Cody, Cody, schoolboy, (with glutethimide) doors &amp; fours, loads, pancakes and syrup</td>
<td>Injected, swallowed</td>
<td>Less analgesia, sedation, and respiratory depression than morphine</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>Actiq, Duragesic, Sublimaze: Apache, China girl, China white, dance fever, friend, goodfella, jackpot, murder 8, TNT, Tango and Cash</td>
<td>Injected, smoked, snorted</td>
<td>Pain relief, euphoria, drowsiness / nausea, constipation, confusion, sedation, respiratory depression and arrest, tolerance, addiction, unconsciousness, coma, death</td>
</tr>
<tr>
<td>Heroin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Abuse and Addiction</td>
<td>Morphine</td>
<td>diacetylmorphine: brown sugar, dope, H, horse, junk, skag, skunk, smack, white horse</td>
<td>injected, smoked, snorted</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
<td>---------------------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Opium</td>
<td>Roxanol, Duramorph: M, Miss Emma, monkey, white stuff</td>
<td>injected, swallowed, smoked</td>
<td></td>
</tr>
<tr>
<td>Oxycodone HCL</td>
<td>Laudanum, paregoric: big O, black stuff, block, gum, hop</td>
<td>swallowed, smoked</td>
<td></td>
</tr>
<tr>
<td>hydrocodonebitartrate, acetaminophen</td>
<td>OxyContin: Oxy, O.C., killer</td>
<td>swallowed, snorted, injected</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vicodin: vike, Watson-387</td>
<td>swallowed</td>
<td></td>
</tr>
<tr>
<td>STIMULANTS</td>
<td>Amphetamine, Dexedrine: bennies, black beauties, crosses, hearts, LA turnaround, speed, truck drivers, uppers</td>
<td>injected, swallowed, snorted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cocaine hydrochloride: blow, bump, C, candy, Charlie, coke, crack, flake, rock, snow, tooth</td>
<td>injected, smoked, snorted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MDMA (methylenedioxymethamphetamine)</td>
<td>swallowed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Methamphetamine</td>
<td>Desoxyn: chalk, crank, crystal, fire, glass, go fast, ice, meth, speed</td>
<td>injected, swallowed, smoked, snorted</td>
</tr>
<tr>
<td></td>
<td>Methylenphedate (safe and effective for treatment of ADHD)</td>
<td>Ritalin: JIF, MPH, R-ball, Skippy, the smart drug, vitamin R</td>
<td>injected, swallowed, snorted</td>
</tr>
<tr>
<td></td>
<td>nicotine</td>
<td>cigarettes, cigars, smokeless tobacco, snuff, spit tobacco, bids, chew</td>
<td>smoked, snorted, taken in snuff and spit tobacco</td>
</tr>
</tbody>
</table>

**Increased heart rate, blood pressure, metabolism; feelings of exhilaration, energy, increased mental alertness / rapid or irregular heart beat; reduced appetite, weight loss, heart failure, nervousness, insomnia**

**Rapid breathing / tremor, loss of coordination; irritability, anxiousness, restlessness, delirium, panic, paranoia, impulsive behavior, aggressiveness, tolerance, addiction, psychosis**

**Increased temperature / chest pain, respiratory failure, nausea, abdominal pain, strokes, seizures, headaches, malnutrition, panic attacks**

**Mild hallucinogenic effects, increased tactile sensitivity, empathic feelings/ impaired memory and learning, hyperthermia, cardiac toxicity, renal failure, liver toxicity**

**Aggression, violence, psychotic behavior / memory loss, cardiac and neurological damage; impaired memory and learning, tolerance**

**Additional effects attributable to tobacco exposure: adverse pregnancy outcomes; chronic lung disease, cardiovascular disease, stroke, cancer; tolerance**
Addictions

2.3.1 Opiates
The opiates are a group of chemicals derived from the opium poppy (papaversonniferum); synthetic compounds with similar properties are called opioids. They have potent analgesic properties and as such have wide legitimate uses in medicine. They are widely abused for their euphoriant and anxiolytic properties. Heroin is the most frequently abused opiate.

2.3.2 Depressants
Drugs of this group produce their effects by generalised or specific cortical depression. They include the benzodiazepines, alcohol, and the barbiturates. They can be taken for their pleasurable anxiolytic and relaxant properties alone, or as a way of counteracting unpleasant side-effects of other drugs of abuse.

2.3.3 Stimulants
These drugs potentiate neuro-transmission and increase cortical excitability producing effects of increased alertness and endurance, diminished need for sleep, and a subjective sense of well-being. They include cocaine (and crack cocaine), amphetamines, 3,4, methylenedioxymethamphetamine (MDMA or ecstasy), and caffeine.

2.3.4 Hallucinogens
Hallucinogens (or psychedelics) are a heterogeneous group of natural and synthetic substances which produce altered sensory and perceptual experiences. They include: lysergic acid diethylamide (LSD), phenylcyclidine (PCP), magic mushrooms, ketamine, mescaline, 2,5-di-methoxy 4-methylamphetamine (DOM), and dimethyltryptamine (DMT).
2.3.5 Other Drugs

a) Cannabis

This is the most commonly used illegal drug, with only a small minority of its users ever using another illegal drug. It has been used for centuries as a pleasurable mind-altering substance and as a medication for a wide variety of ailments. Clinical trials are underway to clarify its role in the treatment of chronic pain. Its illegal use is of interest to psychiatrists because of its association with other drugs of abuse (as a gateway drug) and because of its exacerbating effect on chronic psychotic illnesses.

Cannabis is produced from the dried leaves, flowers, stems, and seeds of the weed Cannabis Sativa. It may be distributed as herbal material (grass or marijuana), as a resin (hash), or as cannabis oil. Cannabis may be smoked in cigarettes, alone, or mixed with tobacco; the resin form may be eaten directly or incorporated into foodstuffs (e.g. cakes).

Usage pattern is very variable, from infrequent situational use to daily heavy use; the latter at highest risk of harmful effects and most likely to take other drugs.

The effects of intoxication are apparent within minutes if the drug is smoked, peaking in 30 minutes and lasting 2-5 hours. The effects of orally consumed cannabis are slower to begin and more prolonged. The immediate effects include mild euphoria, a sense of enhanced well-being, subjective sense of enhanced sensation, relaxation, altered time sense, and increased appetite. Physically there is mild tachycardia and variable dysarthria and ataxia.

Acute harmful effects include mild paranoia, panic attacks, and accidents associated with delayed reaction time. Cannabis is normally smoked with tobacco, therefore all of the health risks associated with tobacco will also apply. The tendency of cannabis smokers to inhale deeply and to retain the smoke in the lungs for as long as possible will exacerbate this risk. Chronic harmful effects include dysthymia, anxiety/depressive illnesses, the disputed amotivational syndrome (possibly representing a combination of chronic intoxication in a heavy user and a long half-life). The drug is not usually associated with physical dependency but there is a mild but characteristic withdrawal syndrome in very heavy regular users.

In addition, in regular users it is associated with dose-related paranoid ideation and other psychotic features.

b) Volatile substances

Simple hydrocarbons such as acetone, toluene, xylene, and butane have intoxicant properties. These chemicals are found in a variety of common products including glue, solvents, lighter fuel, paint stripper, fire extinguishers, aerosols, paints, petrol, typewriter correcting fluid, and nail varnish remover. They are rapidly absorbed when deeply inhaled or by sniffing propellant gases or aerosols. They cause non-specific increased permeability of nerve cell membranes and produce euphoriant effects, disinhibition, slurred speech and blurred vision, and visual misperceptions.

Acute harmful effects include local irritation, headache, cardiac arrhythmias, acute suffocation by bag or laryngeal oedema, unconsciousness, and sudden death. Chronic harmful effects include liver and kidney damage, memory/concentration impairment, and probable long-term cognitive impairment. There is a withdrawal syndrome similar to alcohol in very heavy regular users.
c) **Anabolic steroids**

These prescription-only medicines (e.g. nandrolone and stanozolol) have limited legitimate uses in the treatment of aplastic anaemia and osteoporosis. They can be abused by athletes and body builders seeking competitive advantage or, more rarely, for their euphoriant effects alone. They produce increased muscle mass and strength, with increased training time and reduced recovery time as well as euphoriant effects and a sense of increased energy levels.

Use of anabolic steroids is associated with physical health problems including hypertension, hypogonadism, gynaecomastia, amenorrhoea, liver damage, impotence, and male pattern baldness; and with mental health problems including acute emotional instability.

### 2.4 ASSESSMENT OF THE DRUG USER

In most cases an assessment of a patient’s history of drug use will form part of a routine psychiatric interview. In addition, all doctors should consider the possibility of, and be prepared to ask about, comorbid drug misuse when interviewing patients for other reasons. The more detailed assessment described here is appropriate for patients in whom drug use is the primary focus of clinical concern and who are being assessed for entry into a treatment programme. The detailed assessment of a patient with drug use problems will usually be carried out over more than one consultation. There are only a few circumstances (such as an opiate-dependent patient presenting as an acute medical emergency), where treatment should be considered before full assessment. History should cover the following topics:

a) **Background information**

Name, address, next of kin, GP, names of other professionals involved (e.g. social worker, probation officer).

b) **Reasons for consultation now**

Why has the drug user presented now, (e.g. pressure from family, pending conviction, had enough, increasing difficulty injecting)? What does the user seek from the program? In females, is there a possibility of pregnancy?

c) **Current drug use**

Enquire about each drug taken over the previous 4 weeks. Describe the frequency of use (e.g. daily, most days, at weekends); and the number of times taken each day. Record the amount taken and the route. Ask the user about episodes of withdrawal. Include alcohol, tobacco, and cannabis. If there is IV use, inquire about needle or other equipment sharing.

d) **Lifetime drug use**

Record the age at first use of drugs and the changing pattern of drug use until the most recent consultation. Enquire about periods of abstinence or stability and the reasons for this (e.g. prison, relationship, treatment programme).

e) **Complications of drug use**

Overdoses deliberate or accidental. History of cellulitis, abscesses, or phlebitis. Hepatitis B and C and HIV status if known.
f) Previous treatment episodes
Timing, locus, and type of previous drug treatment. How did the treatment attempt end? Was the treatment helpful?

g) Medical and psychiatric history
All episodes of medical or psychiatric inpatient care. Contact with hospital specialists. Current health problems. Relationship with GP.

h) Family history
Are there other family members with drug or alcohol problems? Family history of medical or psychiatric problems.

i) Social history
Current accommodation. How stable is this accommodation? Sexual orientation and number of sexual partners. Enquire about safe sex precautions. Describe the user’s relationship: sexual, personal, and family. Note how many of these individuals currently use drugs.

j) Forensic history
Previous or pending convictions. Periods of imprisonment. Enquire about continuing criminal activity to support drug use (remind the patient about confidentiality).

k) Patient’s aims in seeking treatment
What is the patient’s attitude to drug use? What treatment options do they favour?

l) Mental status examination (MSE)
Observe for history or objective signs of depressed mood or suicidal thoughts or plans. Inquire directly about generalised anxiety and panic attacks (a benzodiazepine user may be self medicating a neurotic condition). Inquire directly about paranoid ideas and hallucinatory experiences and the directness or otherwise of their relationship with drug use.

m) Physical examination

n) Urine screening
This is essential. Several specimens should be taken over several weeks. Repeated absence of evidence of a drug on screening make its dependent use unlikely. Occasionally, testing errors do occur so do not take action (e.g. stopping maintenance prescription) on the basis of the results of a single sample.

o) Blood testing
FBC, LFT, discuss with patient the need for HIV and Hepatitis screening.

**Standardised assessment and screening tools:** Such tools can be a useful means of gathering data by providing an objective (reliable and valid) view of the client’s difficulties and current life situation (Ries, 1995; Winters, 1999). Furthermore, when conducted appropriately the process of standardised assessment can be a source of rapport building.
### Summary of available screening and assessment measures

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Utility/Measures</th>
<th>Administration</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLOBAL INSTRUMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addiction Severity Index (ASI)</td>
<td>Assessment and outcome measurement. 30-day &amp; lifetime alcohol use, drug use, medical problems, psychiatric problems, family/social problems, employment, legal problems.</td>
<td>Interview or self-report</td>
<td>Widely used across a range of population groups.</td>
<td>Psychometric and interpretation concerns. Less extensive Australian use.</td>
<td>No</td>
</tr>
<tr>
<td>Brief Treatment Outcome Measures (BTOM) / Australian Alcohol Treatment Outcome Measure (AATOM)</td>
<td>Outcome measurement. Bloodborne virus risk, drug use, social and psychological functioning, health.</td>
<td>Interview</td>
<td>Adequate reliability and validity. Australian. No training required. Previous use within O&amp;A sector in NSW. Public domain.</td>
<td>Limited testing across populations.</td>
<td>No</td>
</tr>
<tr>
<td>Health of the Nation Outcome Scale (HoNOS)</td>
<td>Severity of aggression, self harm, D&amp;A use, memory impairment, physical problems, mood disturbance, hallucinations and delusions, other mental, social relationships/environment.</td>
<td>Interview</td>
<td>Generally adequate validity and reliability. Thoroughly evaluated and extensively used across a range of populations (incl. Indigenous Australians). Public domain.</td>
<td>Inter-rater reliability concerns. Training required.</td>
<td>No</td>
</tr>
<tr>
<td>Maudsley Addiction Profile (MAP)</td>
<td>Outcome measurement. Substance use, health risk behaviour, physical and psychological health, social functioning.</td>
<td>Self-report or interview</td>
<td>Adequate reliability and validity. Used widely across different cultural groups. Public domain.</td>
<td>Limited validation in specific population groups and outside of Europe.</td>
<td>No</td>
</tr>
<tr>
<td>Opiate Treatment Index (OTI)</td>
<td>Assessment and outcome measurement. D&amp;A use, risk taking, social functioning, criminality, health status, psychological adjustment.</td>
<td>Interview</td>
<td>Good psychometrics. Australian. Public domain.</td>
<td>Limited empirical evidence for sub-populations.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Alcohol and Substance Involvement Screening Test (ASSIST)</strong></td>
<td>Screening. D&amp;A use and risk (lifetime/current substance use, specific substance involvement, frequency, dependence, abuse, intrusive use).</td>
<td>Interview</td>
<td>Good psychometrics across a range of cultures. Brief and simple to administer. Includes brief intervention strategies. Public domain.</td>
<td>Concerns about utility in females, Indigenous and older populations. Intended for general populations.</td>
<td>No</td>
</tr>
<tr>
<td><strong>Alcohol Use Disorders Identification Test (AUDIT)</strong></td>
<td>Screening and outcome measurement. Alcohol use: consumption, dependence, and related problems.</td>
<td>Self-report or interview</td>
<td>Freely available. Brief. Good psychometrics across a vast range of populations (incl. mentally ill). No training required. Australian version.</td>
<td>Concerns about utility in females, Indigenous and older populations. Intended for general populations.</td>
<td>No</td>
</tr>
<tr>
<td>Dartmouth Assessment of Lifestyle Instrument (DALI)</td>
<td>Screening. Substance use disorders use with people with severe mental illness.</td>
<td>Interview</td>
<td>Brief and simple. No special training required. Adequate psychometrics</td>
<td>Limited studies in different populations.</td>
<td>No</td>
</tr>
<tr>
<td>Drug Abuse Screening Test (DAST)</td>
<td>Screening and assessment. Identify problem drug use.</td>
<td>Self-report or interview</td>
<td>Brief. Freely available. Good psychometrics across a range of populations (incl. mentally ill).</td>
<td>Concerns over applicability to women and across cultures. Does not discriminate between past and present use.</td>
<td>No</td>
</tr>
<tr>
<td>Michigan Alcoholism Screening Test (MAST)</td>
<td>Screening and assessment. Identify problem alcohol use.</td>
<td>Self-report or interview</td>
<td>Brief. Public domain. Good psychometrics across a range of populations (incl. mentally ill). No training required for use.</td>
<td>Does not discriminate between past and present drinking. Concerns over applicability to women and across cultures.</td>
<td>No</td>
</tr>
<tr>
<td>T-ACE/TWEAK</td>
<td>Screening. Specifically designed to identify at-risk drinking problems (but has some utility in other groups).</td>
<td>Interview</td>
<td>Available online without cost. Very brief. Moderate psychometrics. No training required.</td>
<td>Does not provide a picture of pattern of use. Debate over suitable cut-off scores.</td>
<td>No</td>
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<tr>
<td><strong>D&amp;A SEVERITY INSTRUMENTS</strong></td>
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<tr>
<td>Alcohol Dependence Scale (ADS)</td>
<td>Assessment and outcome measurement. Identify and assess alcohol abuse and dependence.</td>
<td>Self-report</td>
<td>Adequate psychometrics. Brief. Fairly widely used in a variety of populations.</td>
<td>Copyrighted/cost.</td>
<td>Yes</td>
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Self Assessment Questions 2

1) What information is collected as part of History during assessment of the drug abuser?

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2) What are Hallucinogens?

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3) What are the categories of drugs of abuse?

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2.5 TREATMENT AND MANAGEMENT OF SUBSTANCE ABUSE AND ADDICTIONS

The longer-term goal of treatment will be eventual abstinence from drugs, but this may not be an achievable short- or medium-term goal in an individual case. Immediate treatment aims are therefore: to reduce drug related mortality and morbidity; to reduce
Addictions

community infection rates; to reduce criminal activity, including the need for drug users to sell to others to finance their own habit; to optimise the patient’s physical and mental health; and to stabilise where appropriate on an alternative substitute drug. The following things can be kept in mind.

i) Make diagnosis


Where there is evidence of psychotic illness or severe depressive illness the patient may require inpatient assessment.

ii) Engage in service

Treatment of drug misuse cannot be carried out through one off interventions. Patients should be engaged in the service by empathic and non-judgemental interviewing, availability of the service close to the point of need, and ability of the service to respond to change in a previously ambivalent patient. Substitute prescribing will be a strong motivator for engagement in some patients but should always also have a role in helping the patient achieve some worthwhile change.

iii) Decide treatment goals and methods

After assessment and diagnosis the doctor should discuss with the patient their thoughts about treatment options given the patient’s drug history and local treatment availability. The doctor may have strong feelings about the appropriateness of a certain treatment but this will not be successful unless the patient agrees. Plans may include:

- Return to dependent use as previously. Where individuals present in withdrawals, without other medical, surgical, or psychiatric reasons for admission, and where there is no history of complicated withdrawal, and where there has been no previous involvement in treatment services, it is inappropriate to prescribe. The individual should not receive replacement medication. They should be offered the opportunity to attend for further assessment.

- Counselling and support for non-dependent drug use particularly episodic use this may be the appropriate course. Give drug information and harm-reduction advice, possibly coupled with referral to a community resource.

- Detoxification: Where there is drug dependence and the patient wishes abstinence, then a plan for detox is considered. This may be community-based, with psychological support, symptomatic medication, or reducing substitute medication, or as an inpatient. Consideration should be given to support after detox. How is abstinence to be maintained?

  - Supported detox without prescription. Some individuals can withdraw from drugs of dependence without use of a prescription. This may occur particularly where other changes in a person’s life (e.g. change of area, break from dependent partner) facilitate abstinence. Unsupported detox without any medical help is frequently reported by users.

  - Supported detox with symptomatic medication. Here, in addition to the support mentioned above, the individual is prescribed other, non-replacement...
drugs to ameliorate withdrawal symptoms (e.g. lofexidine in opiate withdrawal).

– Conversion to substitute drug with aim of detox Here the aim is to convert the individual’s drug use from street-bought to prescribed, Then, from a period of stability, attempt supervised reduction in dose, aiming towards abstinence.

• Conversion to substitute drug with aim of maintenance. Here the aim again is to convert from street to prescribed drugs, with stabilisation via maintenance prescribing in the medium term. In a dependent user who does not feel that they can move to abstinence in the short term, maintenance prescribing to suitably selected patients is useful and associated with overall health benefits.

iv) Address other needs

The drug treatment service should consider part of its role as being a gateway to other services which the drug user may require but be reluctant or unable to approach independently. Patients with social, financial, or physical health needs should have these explored and the need for referral considered. Do not make such referrals without the knowledge and agreement of the patient. Review psychiatric symptoms which have been attributed to drug use to assess their resolution. Consider in-house or specialist psychiatric treatment of residual anxiety/ depressive symptoms.

**Principles in the management of Substance Abuse and Addictions**

Addiction is a brain disease. While the path to drug addiction begins with the act of taking drugs, over time a person’s ability to choose not to do so becomes compromised, and seeking and consuming the drug becomes compulsive. This behaviour results largely from the effects of prolonged drug exposure on brain functioning. Addiction affects multiple brain circuits, including those involved in reward and motivation, learning and memory, and inhibitory control over behaviour. Some individuals are more vulnerable than others to becoming addicted, depending on genetic makeup, age of exposure to drugs, other environmental influences, and the interplay of all these factors.

Addiction is often more than just compulsive drug taking—it can also produce far-reaching consequences. For example, drug abuse and addiction increase a person’s risk for a variety of other mental and physical illnesses related to a drug-abusing lifestyle or the toxic effects of the drugs themselves. Additionally, a wide range of dysfunctional behaviours can result from drug abuse and interfere with normal functioning in the family, the workplace, and the broader community. Because drug abuse and addiction have so many dimensions and disrupt so many aspects of an individual’s life, treatment is not simple. Effective treatment programs typically incorporate many components, each directed to a particular aspect of the illness and its consequences. Addiction treatment must help the individual stop using drugs, maintain a drug-free lifestyle, and achieve productive functioning in the family, at work, and in society.

Thus, treatment planning must be multidimensional and recognize that there is more than one effective treatment for substance dependence. However, there are certain basic treatment principles that apply across modalities.

**Principles of Effective Treatment**

Scientific research in the west since the mid-1970s shows that treatment can help patients addicted to drugs stop using, avoid relapse, and successfully recover their lives. Based on this research, key principles have emerged that should form the basis of any effective treatment programs:
Addiction is a complex but treatable disease that affects brain function and behaviour: Drugs of abuse alter the brain’s structure and function, resulting in changes that persist long after drug use has ceased. This may explain why drug abusers are at risk for relapse even after long periods of abstinence and despite the potentially devastating consequences.

No single treatment is appropriate for everyone: Matching treatment settings, interventions, and services to an individual’s particular problems and needs is critical to his or her ultimate success in returning to productive functioning in the family, workplace, and society.

Treatment needs to be readily available: Because drug-addicted individuals may be uncertain about entering treatment, taking advantage of available services the moment people are ready for treatment is critical. Potential patients can be lost if treatment is not immediately available or readily accessible. As with other chronic diseases, the earlier treatment is offered in the disease process, the greater the likelihood of positive outcomes.

Effective treatment attends to multiple needs of the individual, not just his or her drug abuse: To be effective, treatment must address the individual’s drug abuse and any associated medical, psychological, social, vocational, and legal problems. It is also important that treatment be appropriate to the individual’s age, gender, ethnicity, and culture.

Remaining in treatment for an adequate period of time is critical: The appropriate duration for an individual depends on the type and degree of his or her problems and needs. Research indicates that most addicted individuals need at least 3 months in treatment to significantly reduce or stop their drug use and that the best outcomes occur with longer durations of treatment. Recovery from drug addiction is a long term process and frequently requires multiple episodes of treatment. As with other chronic illnesses, relapses to drug abuse can occur and should signal a need for treatment to be reinstated or adjusted.

Counseling—individual and/or group—and other behavioural therapies are the most commonly used forms of drug abuse treatment: Behavioural therapies vary in their focus and may involve addressing a patient’s motivation to change, providing incentives for abstinence, building skills to resist drug use, replacing drug-using activities with constructive and rewarding activities, improving problem solving skills, and facilitating better interpersonal relationships. Also, participation in group therapy and other peer support programs during and following treatment can help maintain abstinence.

Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioural therapies: For example, methadone and buprenorphine are effective in helping individuals addicted to heroin or other opioids stabilize their lives and reduce their illicit drug use. Naltrexone is also an effective medication for some opioid-addicted individuals and some patients with alcohol dependence.

An individual’s treatment and services plan must be assessed continually and modified as necessary to ensure that it meets his or her changing needs: A patient may require varying combinations of services and treatment components during the course of treatment and recovery. In addition to counseling or psychotherapy, a patient may require medication, medical services, family therapy, parenting instruction, vocational rehabilitation, and/or social and legal services. For many patients, a continuing care approach provides the best results,
with the treatment intensity varying according to a person’s changing needs.

- **Many drug-addicted individuals also have other mental disorders:** Because drug abuse and addiction—both of which are mental disorders—often co-occur with other mental illnesses, patients presenting with one condition should be assessed for the other(s). And when these problems co-occur, treatment should address both (or all), including the use of medications as appropriate.

- **Medically assisted detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug abuse:** Although medically assisted detoxification can safely manage the acute physical symptoms of withdrawal and, for some, can pave the way for effective long-term addiction treatment, detoxification alone is rarely sufficient to help addicted individuals achieve long-term abstinence. Thus, patients should be encouraged to continue drug treatment following detoxification.

- **Treatment does not need to be voluntary to be effective:** Sanctions or enticements from family, employment settings, and/or the criminal justice system can significantly increase treatment entry, retention rates, and the ultimate success of drug treatment interventions.

- **Drug use during treatment must be monitored continuously, as lapses during treatment do occur:** Knowing their drug use is being monitored can be a powerful incentive for patients and can help them withstand urges to use drugs. Monitoring also provides an early indication of a return to drug use, signaling a possible need to adjust an individual’s treatment plan to better meet his or her needs.

- **Treatment programs should assess patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases as well as provide targeted risk reduction counseling to help patients modify or change behaviours that place them at risk of contracting or spreading infectious diseases:** Typically, drug abuse treatment addresses some of the drug-related behaviours that put people at risk of infectious diseases. Targeted counseling specifically focused on reducing infectious disease risk can help patients further reduce or avoid substance-related and other high-risk behaviours. Counseling can also help to manage their illness.

You can refer to Table 2 of Section 1.8 in the Unit 1 regarding choosing an appropriate treatment setting.

**Comprehensive Drug Abuse Treatment**
Optimum care will involve engaging the patients with the service, exploring and encouraging motivation to change, and suggesting harm reduction strategies. It should always be a comprehensive treatment plan addressing the various needs of the individual and involving the family and the community.

**Medical Detoxification**

A process whereby individuals are systematically withdrawn from addicting drugs in an inpatient or outpatient setting, typically under the care of a physician. Detoxification is sometimes called a distinct treatment modality but is more appropriately considered a precursor of treatment, because it is designed to treat the acute physiological effects of stopping drug use. Medications are available for detoxification from opiates, nicotine, benzodiazepines, alcohol, barbiturates, and other sedatives. In some cases, particularly for the last three types of drugs, detoxification may be a medical necessity, and untreated withdrawal may be medically dangerous or even fatal. Detoxification is not designed to address the psychological, social, and behavioural problems associated with addiction and therefore does not typically produce lasting behavioural changes necessary for recovery. Detoxification is most useful when it incorporates formal processes of assessment and referral to subsequent drug addiction treatment.

**Scientifically based psychological approaches to drug addiction treatment**

**Relapse Prevention:** A cognitive behavioural therapy, it was developed for the treatment of problem drinking and adapted later for cocaine addicts. Cognitive-behavioural strategies are based on the theory that learning processes play a critical role in the development of maladaptive behavioural patterns. Individuals learn to identify and correct problematic behaviours. Relapse prevention encompasses several cognitive-behavioural strategies that facilitate abstinence as well as provide help for people who experience relapse. The relapse prevention approach to the treatment of cocaine addiction consists of a collection of strategies intended to enhance self-control. Specific techniques include exploring the positive and negative consequences of continued use, self-monitoring to recognize drug cravings early on and to identify high-risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use. A central element of this treatment is anticipating the problems patients are likely to meet and helping them develop effective coping strategies. Research indicates that the skills individuals learn through relapse prevention therapy remain after the completion of treatment. In one study, most people receiving this cognitive-behavioural approach maintained the gains they made in treatment throughout the year following treatment.

**Cognitive Behaviour Therapy:** Suitable for Alcohol, Marijuana, Cocaine, Methamphetamine, Nicotine abuse and dependence. Cognitive-behavioural therapy was developed as a method to prevent relapse when treating problem drinking, and later was adapted for cocaine-addicted individuals. Cognitive-behavioural strategies are based on the theory that learning processes play a critical role in the development of maladaptive behavioural patterns. Individuals learn to identify and correct problematic behaviours by applying a range of different skills that can be used to stop drug abuse and to address a range of other problems that often co-occur with it. Cognitive-behavioural therapy generally consists of a collection of strategies intended to enhance self-control. Specific techniques include exploring the positive and negative consequences of continued use, self-monitoring to recognize drug cravings early on and to identify high risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use. A central element of this treatment is anticipating likely problems and helping patients develop effective coping strategies.
Supportive-Expressive Psychotherapy: It is a time-limited, focused psychotherapy that has been adapted for heroin- and cocaine-addicted individuals. The therapy has two main components:

- Supportive techniques to help patients feel comfortable in discussing their personal experiences.
- Expressive techniques to help patients identify and work through interpersonal relationship issues. Special attention is paid to the role of drugs in relation to problem feelings and behaviours, and how problems may be solved without recourse to drugs.

Individualized Drug Counseling: Focuses directly on reducing or stopping the addict’s illicit drug use. It also addresses related areas of impaired functioning such as employment status, illegal activity, family/social relations, as well as the content and structure of the patient’s recovery program. Through its emphasis on short-term behavioural goals, individualized drug counseling helps the patient develop coping strategies and tools for abstaining from drug use and then maintaining abstinence. The addiction counselor encourages 12-step participation and makes referrals for needed supplemental medical, psychiatric, employment, and other services. Individuals are encouraged to attend sessions one or two times per week. In a study that compared opiate addicts receiving only methadone to those receiving methadone coupled with counseling, individuals who received only methadone showed minimal improvement in reducing opiate use. The addition of counseling produced significantly more improvement. The addition of onsite medical/psychiatric, employment, and family services further improved outcomes.

In another study with cocaine addicts, individualized drug counseling, together with group drug counseling, was quite effective in reducing cocaine use. Thus, it appears that this approach has great utility with both heroin and cocaine addicts in outpatient treatment.

Motivational Enhancement Therapy: A client-centered counseling approach for initiating behaviour change by helping clients to resolve ambivalence about engaging in treatment and stopping drug use. This approach employs strategies to evoke rapid and internally motivated change in the client, rather than guiding the client stepwise through the recovery process.

This therapy consists of an initial assessment battery session, followed by two to four individual treatment sessions with a therapist. The first treatment session focuses on providing feedback generated from the initial assessment battery to stimulate discussion regarding personal substance use and to elicit self-motivational statements. Motivational interviewing principles are used to strengthen motivation and build a plan for change. Coping strategies for high-risk situations are suggested and discussed with the client. In subsequent sessions, the therapist monitors change, reviews cessation strategies being used, and continues to encourage commitment to change or sustained abstinence. Clients are sometimes encouraged to bring a significant other to sessions. This approach has been used successfully with alcoholics, nicotine and marijuana-dependent individuals.

Behavioural Therapy for Adolescents: Incorporates the principle that unwanted behaviour can be changed by clear demonstration of the desired behaviour and consistent reward of incremental steps toward achieving it. Therapeutic activities include fulfilling specific assignments, rehearsing desired behaviours, and recording and reviewing progress, with praise and privileges given for meeting assigned goals. Urine samples are collected regularly to monitor drug use. The therapy aims to equip the patient to gain three types of control:
Stimulus Control helps patients avoid situations associated with drug use and learn to spend more time in activities incompatible with drug use.

Urge Control helps patients recognize and change thoughts, feelings, and plans that lead to drug use.

Social Control involves family members and other people important in helping patients avoid drugs. A parent or significant other attends treatment sessions when possible and assists with therapy assignments and reinforcing desired behaviour.

Multidimensional Family Therapy (MDFT): For adolescents, it is an outpatient family-based drug abuse treatment. MDFT views adolescent drug use in terms of a network of influences (that is, individual, family, peer, community) and suggests that reducing unwanted behaviour and increasing desirable behaviour occur in multiple ways in different settings. Treatment includes individual and family sessions held in the clinic, in the home, or with family members at the family court, school, or other community locations. During individual sessions, the therapist and adolescent work on important developmental tasks, such as developing decision making, negotiation, and problem-solving skills. Teenagers acquire skills in communicating their thoughts and feelings to deal better with life stressors, and vocational skills. Parallel sessions are held with family members. Parents examine their particular parenting style, learning to distinguish influence from control and to have a positive and developmentally appropriate influence on their child.

Multisystemic Therapy (MST): Addresses the factors associated with serious antisocial behaviour in children and adolescents who abuse drugs. These factors include characteristics of the adolescent (for example, favorable attitudes toward drug use), the family (poor discipline, family conflict, parental drug abuse), peers (positive attitudes toward drug use), school (dropout, poor performance), and neighborhood (criminal subculture). By participating in intense treatment in natural environments (homes, schools, and neighborhood settings) most youths and families complete a full course of treatment. MST significantly reduces adolescent drug use during treatment and for at least 6 months after treatment. Reduced numbers of incarcerations and out-of-home placements of juveniles offset the cost of providing this intensive service and maintaining the clinicians’ low caseloads.

12 Step Facilitation Therapy: Used for the treatment of Alcohol, Stimulants, Opiate dependence and abuse, Twelve-step facilitation therapy is an active engagement strategy designed to increase the likelihood of a substance abuser becoming affiliated with and actively involved in 12 step self-help groups and, thus, promote abstinence.

Three key aspects predominate: acceptance, which includes the realization that drug addiction is a chronic, progressive disease over which one has no control, that life has become unmanageable because of drugs, that willpower alone is insufficient to overcome the problem, and that abstinence is the only alternative; surrender, which involves giving oneself over to a higher power, accepting the fellowship and support structure of other recovering addicted individuals, and following the recovery activities laid out by the 12 step program; and active involvement in 12 step meetings and related activities. While the efficacy of 12 step programs (and 12 step facilitation) in treating alcohol dependence has been established, the research on other abused drugs is more preliminary but promising for helping drug abusers sustain recovery.

Community Reinforcement Approach (CRA) Plus Vouchers: This is an intensive 24-week outpatient therapy for treatment of cocaine and alcohol addiction. The treatment goals are twofold:
To achieve cocaine abstinence long enough for patients to learn new life skills that will help sustain abstinence.

To reduce alcohol consumption for patients whose drinking is associated with cocaine use.

Patients attend one or two individual counseling sessions per week, where they focus on improving family relations, learning a variety of skills to minimize drug use, receiving vocational counseling, and developing new recreational activities and social networks. Those who also abuse alcohol receive clinic-monitored disulfiram (Antabuse) therapy. Patients submit urine samples two or three times each week and receive vouchers for cocaine-negative samples.

The value of the vouchers increases with consecutive clean samples. Patients may exchange vouchers for retail goods that are consistent with a cocaine-free lifestyle. This approach facilitates patients’ engagement in treatment and systematically aids them in gaining substantial periods of cocaine abstinence.

**Voucher-Based Reinforcement Therapy In Methadone Maintenance Treatment:**

Helps patients achieve and maintain abstinence from illegal drugs by providing them with a voucher each time they provide a drug-free urine sample. The voucher has monetary value and can be exchanged for goods and services consistent with the goals of treatment. Initially, the voucher values are low, but their value increases with the number of consecutive drug-free urine specimens the individual provides. Cocaine- or heroin positive urine specimens reset the value of the vouchers to the initial low value. The contingency of escalating incentives is designed specifically to reinforce periods of sustained drug abstinence. Studies show that patients receiving vouchers for drug-free urine samples achieved significantly more weeks of abstinence and significantly more weeks of sustained abstinence than patients who were given vouchers independent of urine analysis results.

**The Matrix Model:** The model provides a framework for engaging stimulant abusers in treatment and helping them achieve abstinence. Patients learn about issues critical to addiction and relapse, receive direction and support from a trained therapist, become familiar with self-help programs, and are monitored for drug use by urine testing. The program includes education for family members affected by the addiction. The therapist functions simultaneously as teacher and coach, fostering a positive, encouraging relationship with the patient and using that relationship to reinforce positive behaviour change. Therapists are trained to conduct treatment sessions in a way that promotes the patient’s self-esteem, dignity, and self-worth. A positive relationship between patient and therapist is a critical element for patient retention. Treatment materials draw heavily on other tested treatment approaches. Thus, this approach includes elements pertaining to the areas of relapse prevention, family and group therapies, drug education, and self-help participation. Detailed treatment manuals contain work sheets for individual sessions; other components include family educational groups, early recovery skills groups, relapse prevention groups, conjoint sessions, urine tests, 12-step programs, relapse analysis, and social support groups.

**Psychological approaches**

Substance misusers vary in their suitability for psychological treatments, and it may be more or less appropriate in individual cases due to age, cognitive ability or dysfunction, education, willingness and capability or capacity to view problems as psychological. However, psychological treatments are pivotal to treatment effectiveness, even when
pharmacological treatments are administered. Standardisation of approaches and outcome measures is complex. Treatment philosophies, environments and settings may differ greatly (e.g. primary care, accident and emergency, prisons). Additional resources for treatment (e.g. support by other agencies such as housing, education, probation) may vary. Some groups may be discriminated against across a variety of services, because of general stigmas around substance misuse, poorly trained staff, and lack of resources or due to old age, female sex or ethnic minority status.

**Stages of change**

A model for understanding motivation and action towards change in harmful patterns of drug use proposed by Prochaska and DiClemente is helpful in the treatment of substance abuse. Motivation is regarded as a prerequisite for and a precursor to action towards abstinence or more controlled drug use.

- **Pre-contemplation.** The user does not recognise that problem use exists, although this may be increasingly obvious to those around them.
- **Contemplation.** The user may accept that there is a problem and begins to look at both the positive and negative aspects of continued drug use.
- **Decision.** The point at which the user decides on whether to continue drug use or attempt change.
- **Action.** The point of motivation, where the user attempts change. A variety of routes exist by which change may be attempted, which may or may not include medical services.
- **Maintenance.** A stage of maintaining gains made and attempting to improve those areas of life harmed by drug use.
- **Relapse.** A return to previous behaviour but with the possibility of gaining useful strategies to extend the maintenance period on the user’s next attempt.

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<td>1) Mention the types of control behaviour therapy aims at.</td>
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2.6 LET US SUM UP

Taking of substance starts from using it to various degrees of use, resulting in misuse, abuse, harmful use, addiction and dependence. A variety of factors – biological, psychological and social – interact, and result in substance abuse and dependence.

Consequences of substance use cuts across various aspects such as physical consequences, psychological, social, economic, familial and legal consequences. The treatment and management of substance abuse should follow a comprehensive approach.

2.7 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) Tolerance refers to a need for markedly increased amounts of a drug to achieve the desired drug effect or a markedly diminished effect with continued use of the same amount of the drug.

2) Harmful use of substances refers to the continuation of substance use despite evidence of damage to the user’s physical or mental health or to their social, occupational, and familial well-being.

3) acquisition and maintenance

Self Assessment Questions 2

1) Following information is collected as part of History during assessment of the drug abuser:
   
   Background information, reasons for consultation now, current drug use, previous treatment, medical, psychiatric, forensic, family and social history, mental status examination, and physical examination.

2) Hallucinogens (or psychedelics) are a heterogeneous group of natural and synthetic substances which produce altered sensory and perceptual experiences.

3) The categories of drugs of abuse are Opiates, Stimulants, Depressants, Hallucinogens, and Others such as cannabis etc.

Self Assessment Questions 3

1) Behaviour therapy aims at three types of control: stimulus, urge and social control.

2) Detoxification refers to a process whereby individuals are systematically withdrawn from addictive drugs in an inpatient or outpatient setting, typically under the care of a physician.

3) Cognitive behavioural therapy aims at enhancing self-control, self-monitoring to recognize drug cravings early on and to identify high risk situations for use, and developing strategies for coping with and avoiding high-risk situations and the desire to use.

2.8 UNIT END QUESTIONS

1) Differentiate between substance abuse and substance dependence.

2) Explain the concept of drug addiction.
3) Describe the Matrix model.

4) Describe the psychological approaches to drug addiction treatment.

5) What are the principles of effective treatment?

### 2.9 REFERENCES


UNIT 3  TOBACCO ADDICTION

Structure
3.0  Introduction
3.1  Objectives
3.2  Tobacco and Nicotine Dependence
3.3  Epidemiological Trends of Tobacco Use
3.4  Indian Tobacco Products
3.5  Causes of Tobacco Dependence
3.6  Health Hazards associated with Tobacco Use
   3.6.1  Physical Morbidity Associated with Tobacco Use
   3.6.2  Psychiatric Morbidity Associated with Tobacco Use
3.7  Nicotine Withdrawal Syndrome
3.8  Assessment of Tobacco Dependence
3.9  Treatment of Tobacco Dependence
   3.9.1  Nonpharmacological Management
   3.9.2  Pharmacological Management
   3.9.3  Non-nicotine Pharmacological Treatment
3.10  Let Us Sum Up
3.11  Answers to Self Assessment Questions
3.12  Unit End Questions
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3.0  INTRODUCTION

Tobacco is one of the most highly addictive and most extensively used drugs around the world. Cigarette smoking is perhaps the most common form of nicotine use in the world, and certainly the most lethal in the long run. Even though it is considered as a significant risk factor in many health problems such as lung diseases, cancer and cardiovascular diseases, it is highly common throughout the world. The risk for non-smoking people is also high as second hand smoke causes serious health consequences for them. Current scientific literature clearly establishes the actions of nicotine within the central nervous system that lead to the development of dependence, and withdrawal symptoms. Other factors that contribute considerably to nicotine’s highly addictive potential include the efficient drug delivery system of the cigarette, its high level of availability, the small number of legal and social consequences of tobacco use, and the sophisticated marketing and advertising methods used by tobacco companies. The past three decade has seen considerable progress in understanding the neurochemical basis of nicotine’s effects and in the development of effective behavioural and pharmacological interventions to promote cessation. In this Unit you will learn about the causes, health hazards and treatment of tobacco dependence.
3.1 OBJECTIVES

After studying this Unit, you will be able to,

- explain tobacco and nicotine dependence;
- know the Indian tobacco products;
- explain the causes of tobacco and nicotine dependence;
- describe the health hazards of tobacco use;
- know the nicotine withdrawal syndrome;
- describe the assessment of tobacco dependence; and
- discuss the management of tobacco dependence.

3.2 TOBACCO AND NICOTINE DEPENDENCE

Tobacco is a plant product obtained from ‘Solaneace’ family in the plant kingdom. ‘Nicotianatobaccum’ is the main source of tobacco in northern India. There are nearly 3000 chemicals in tobacco smoke and 4000 in smokeless tobacco.

Let us distinguish between a few terms we come across while discussing any substance abuse. These are intoxication, harmful use, abuse, addiction, dependence and withdrawal. The term intoxication is used for a reversible nondependent experience with a substance that produces impairment. Harmful use is similar to abuse, but it usually applies to drugs prescribed by physicians that are not used properly. Psychological dependence, also referred to as habituation, is characterized by a continuous or intermittent craving for the substance to avoid a dysphoric state.

Drug addiction and drug dependence are often used interchangeably. In current nosology, “addiction” word is only used for behaviour addictions and for other substances, “dependence” term is used. Addiction usually refers to repetitive pattern of a behaviour or substance use irrespective of its harmful consequences. Whereas drug dependence usually refers to a syndrome characterised by physiological, cognitive, somatic, psychological set of symptoms associated with use of a particular substance. It is associated with craving, tolerance, withdrawal and use despite harmful consequences of the same.

Brain researchers have found a pleasure centre in the brain, which becomes activated when good (i.e. likable) things like food, sex, music comes our way. Nicotine is the main active chemical in tobacco responsible for addiction, which stimulates the same pleasure centre and therefore is felt by the user as a highly satisfying and rewarding experience, resulting in repeated use. Nicotine generally causes heightened alertness and improved functioning in continuous repetitive tasks. Users also report relaxation and decrease in fatigue with smoking and; irritability, restlessness, anger and frustration with difficulty in concentration and sleep while trying to leave.

From tobacco smoke, nicotine is absorbed through lung and in smokeless tobacco, it passes through mucosal membrane of mouth and nose or skin. Rate of absorption is enhanced in an alkaline environment and reduced in an acidic environment. Because of the large surface area of the lungs, the mildly acidic smoke of cigarettes is absorbed almost immediately and completely on inhalation, giving rise to high concentration arterial nicotine boli which reach the brain in less than 10 seconds. Nicotine has a distributional half-life of about 15 minutes and a terminal half-life in blood of about 2 hours. About 70
to 80 per cent of nicotine is metabolized to cotinine, which has a half-life of around 16 hours. This means that blood levels decline overnight to non-smoking levels, and regular cigarettes are required over the course of the day to maintain elevated blood nicotine concentrations. Repeated inhalation of tobacco generates bolus of nicotine delivered into the brain, superimposed on a relatively stable level of plasma nicotine maintained by the smoker throughout the smoking day.

3.3 EPIDEMIOLOGICAL TRENDS OF TOBACCO USE

Tobacco is the commonest substance of use in India, is legally and socially sanctioned and used in a wide variety of ways including smoking, chewing, applying to gums, sucking and gargling.

Global Adult Tobacco Survey (GATS) India (2010) data revealed that more than one out of three adults in India (35 per cent) used tobacco in some form or the other. Among them, 21 per cent of adults used only smokeless tobacco, 9 per cent only smoked and 5 per cent smoked as well as used smokeless tobacco. Overall tobacco use is much higher among Indian males at 48 percent but is also a serious concern among females among whom prevalence is 20 per cent.

In India, khaini or tobacco-lime mixture (12 per cent) is the most commonly used smokeless tobacco product, followed by gutkha (a mixture of tobacco, lime and areca nut) (8 per cent), betel quid with tobacco (6 per cent) and tobacco dentifrice (5 per cent). Bidi (9 per cent) is most commonly used smoking product, followed by cigarette (6 per cent) and hukkah (1 per cent).

The WHO, the US Centers for Disease Control and Prevention, and the Canadian Public Health Association developed the Global Tobacco Surveillance System (GTSS) to assist the WHO member states in establishing such a method. The Global Health Professions Student Survey (GHPSS) is one of the components of GTSS. All countries conducting the GHPSS use a common survey methodology, similar field procedures for data collection, and similar data management and processing techniques. The GHPSS is a school-based survey of third-year students pursuing advanced degrees in dentistry, medicine, nursing, and pharmacy. The GHPSS uses a core questionnaire that includes questions on demographics, prevalence of tobacco use, knowledge and attitudes about tobacco use, exposure to secondhand smoke (SHS), desire of smokers to stop smoking, perception of the health professional’s role in patient counseling, and training received in counseling patients on smoking-cessation techniques.

As per the Global Health Professions Student Survey (GHPSS), India (2009), 6.5 per cent third year dental students smoked cigarettes and 8.6 per cent used other tobacco products. Among medical students, 13.4 per cent third year medical students smoked cigarettes and 11.6 per cent used other tobacco products. Global Youth Tobacco Survey (GYTS) India, 2009 revealed that 14.6 per cent of 13-15 years school going children in India used tobacco products out of which 4.4 per cent smoked cigarettes and 12.5 per cent used other forms of tobacco. These figures are alarming because these professional students will themselves lead the war against tobacco and because earlier initiation increases chances of long term dependence.

3.4 INDIAN TOBACCO PRODUCTS

- Tobacco use in smoking form: Bidi, cigarette, hookah, chillum and chiroot are the few common modes of smoking tobacco in India. Cigar smoking is limited to...
certain limited social groups. Bidi is an unprocessed form of tobacco wrapped in a _tendu_ leaf and tied with a string. Bidi smoking stick is specific to India although it is being exported and raising alarm bells in other countries as well. It is about 6 times more common than cigarette smoking (Taylor et al 2001). Although bidi contains about 1/4 the amount of tobacco compared to a cigarette, it delivers a comparable amount of tar and nicotine. A bidi is thus no less dangerous than a cigarette.

- **Smokeless Tobacco**: In India, tobacco is used in smokeless manners in a wide variety of ways with multitude products such as betel quid, mixture of tobacco, lime areca nut, tobacco with lime, mishri, mawa, gutkha and many others.

### 3.5 CAUSES OF TOBACCO DEPENDENCE

There is no simple answer to the question - “why people use tobacco?” There are some biological factors as well as factors in the environment which interact together to give rise to tobacco dependence. Initiation of smoking is subject to a number of influences: environmental, behavioural, and personal factors all play a part. Environmental influences include parental smoking (approximately doubling the likelihood of a child starting to smoke), and smoking by siblings and friends. Tobacco advertising and promotions effectively target young people with images of smoking as trendy, sporty, and successful. Young people from deprived backgrounds where smoking is the norm are more likely to become smokers.

Availability, social sanction and peer pressure are important factors that promote initiation and continuation of use of tobacco, leading to tobacco dependence. Cigarette smoking is linked with poor school performance, truancy, low aspirations for future success, and early school leaving or drop-out. Smoking in adolescents is frequently associated with other problem behaviours including alcohol and other drug use and other risk taking or rebellious behaviours, as well as with low self-esteem, anxiety, and depression. School-based interventions to reduce smoking by teenagers have shown some initial success, but longer term follow-up has found that these effects dissipate leading researchers to advocate approaches involving the creation of a wider social environment supportive of non-smoking.

Stressful living circumstances also lead to high rates of smoking in the unemployed, lone parents, people who are divorced or separated, the homeless, heavy drinkers, drug users, and prisoners.

<table>
<thead>
<tr>
<th>Self Assessment Questions 1</th>
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<tbody>
<tr>
<td>1. Differentiate between addiction and dependence.</td>
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<tr>
<td>2. Mention the ways in which tobacco is used.</td>
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</table>
3. What is smokeless tobacco?

3.6 HEALTH HAZARDS ASSOCIATED WITH TOBACCO USE

3.6.1 Physical Morbidity Associated with Tobacco Use

Use of tobacco leads to premature deaths. Smoking causes deaths from cancer, the great bulk of deaths from chronic respiratory disease, and is a major contributor to circulatory diseases. Smoking is recognized to cause 80 per cent or more of all lung cancers. In addition it is responsible for most cancers of the upper respiratory tract (lip, tongue, mouth, pharynx, and larynx) and for a smaller fraction of cancers of the bladder, pancreas, oesophagus, and kidney. Among both men and women, deaths from cardiovascular disease (ischaemic heart disease, aortic aneurysm, and stroke) outnumber those from all other causes, including lung cancer.

Tobacco use in any form has marked effects upon the soft tissues of the oral cavity. Tobacco use is associated with oral precancerous lesions such as leucoplakia and erythroplakia. Leucoplakia is the most common precancerous lesion associated with smoking and/or chewing tobacco. Oral submucous fibrosis (OSMF) is emerging as a new epidemic, especially among the youth. In this disease, fibrous bands develop in the mouth, mucosa loses its elasticity and the ability to open the mouth reduces progressively. In extreme cases, victims may be only able to open their mouths enough to pass through a drinking straw. This disease does not regress, has no known cure and has a very high potential for cancer development. The dramatic increase in OSMF among young people in India has been attributed to chewing gutka and paan masala.

"Tobacco use has an adverse effect on the sexual and reproductive health of both men and women. Men who smoke have a lower sperm count and poorer sperm quality than non-smokers. The effects of maternal tobacco use (smoked and smokeless) during pregnancy include decreased foetal growth, spontaneous abortions, foetal deaths, pregnancy complications including those that predispose to preterm delivery and long term effects on the surviving children. Exposure to second-hand smoke during pregnancy has been associated with lower infant birth weight."

(As well as being the single largest cause of preventable premature death, cigarette smoking is a cause of a number of disabling but generally non-fatal conditions. These include chronic obstructive pulmonory disease, peripheral vascular disease, cataracts, Crohn’s disease, gastric and duodenal ulcers, hip fracture in elderly people, and periodontitis, the major cause of tooth loss in adults. Passive smoking also causes a significant burden of disease in non-smokers, especially infants and children.)
Health Consequences Associated with Tobacco Use

1) Respiratory diseases: chronic obstructive pulmonary disease, pneumonia, bronchitis
2) Oral lesions: leucoplakia, erythroplakia, oral submucosal fibrosis, oral cancer
3) Cancerous lesions: carcinoma involving bladder, cervix, oesophagus, stomach, kidney, larynx, lung, pharynx
4) Heart & blood vessel disease: coronary heart disease, peripheral vascular disease
5) Sexual dysfunction: erectile dysfunction, infertility, decrease sperm counts

The World Health Organization (WHO) has estimated that approximately 5.4 million people died worldwide from tobacco-related illnesses in 2006 and says that “unless urgent action is taken, tobacco’s annual death toll will rise to more than eight million” by the year 2030, with over 80% of those deaths occurring in low-income countries.

3.6.2 Psychiatric Morbidity Associated with Tobacco Use

Tobacco use is higher among persons with mental illness than general population. Among severe mental illnesses, approximately 50 per cent of all psychiatric outpatients, 70 per cent of outpatients with bipolar I disorder, almost 90 per cent of outpatients with schizophrenia, and 70 per cent of substance use disorder patients smoke. Moreover, data from UK (Meltzer et al. 1995) conducted in general population suggested that persons with neurotic disorders e.g. depression, phobia, obsessive compulsive disorder are twice as likely to smoke as compared to general population and are less successful in their attempts to quit smoking than other persons.

It is not fully clear, why do people with mental health problems smoke more, few possible explanations are discussed. There might be common aetiologies to both smoking and mental illness. There is also evidence to suggest that nicotine may be a form of self medication. Nicotine may help ameliorate symptoms of attention deficit hyperactivity disorder, depressive symptoms and negative symptoms of schizophrenia. (www.nice.org.uk/niceMedia/documents/smoking_mentalhealth.pdf).

Tobacco has serious impact on physical and mental health of persons. Thus, a holistic health approach for these patients should address tobacco dependence management in addition to management of primary mental disorder.

3.7 NICOTINE WITHDRAWAL SYNDROME

DSM-V Syndromal Description

Nicotine Dependence

A pattern of nicotine use, leading to clinically significant impairment or distress as manifested by at least three of seven criteria occurring at sometime during a 12 month period.

1) Tolerance

a) Absence of nausea, dizziness and other characteristic symptoms despite using substantial amounts.

b) A diminished effect with continued use of the same amount of nicotine.

2) Withdrawal
a) Presence of characteristic withdrawal syndrome or
b) The use of substance or related substances to relieve or avoid withdrawal symptoms.

3) Use of nicotine in large amounts or over a longer period than was intended.

4) Persistent desire or unsuccessful efforts to cut down or control nicotine use.

5) A great deal of time spent in activities necessary to obtain the substance, in use of the substance or in recovery from its effects.

6) Important social, occupational or recreational activities given up or reduced because of substance use.

7) Continued use despite having a persistent or recurrent physical or psychosocial problem that it is likely to have been caused or exacerbated by nicotine use.

Nicotine Withdrawal

1) Daily use of nicotine for at least several weeks.

2) Abrupt cessation of nicotine use or reduction in the amount of nicotine used, followed within 24 hours by 4 or more of following signs
   - Irritability, frustration or anger
   - Anxiety
   - Difficulty in concentrating
   - Increased Appetite
   - Restlessness
   - Depressed mood
   - Insomnia

3) The symptoms in criteria above causes clinically significant distress or impairment in social, occupational or other important areas of functioning.

4) The symptoms are not due to a general medical condition and are not better accounted for by any other mental disorder.

Self Assessment Questions 2

1) What are the physical health hazards associated with the use of tobacco?

2) Describe the signs of nicotine withdrawal.
3.8 ASSESSMENT OF TOBACCO DEPENDENCE

Assessment can be carried out by various means. These are Clinical examination and interview, Instruments or Questionnaires, and Objective methods. Let us know about each of these.

A) Clinical: Here, assessment is carried out by eliciting information as well as carrying out a detailed examination of the patient in following domains:

i) History
ii) Physical examination
iii) Mental status examination

The relevant information can be gathered from patient as well as the care giver including.

- Frequency of use
- type(s) of tobacco product being used
- duration of use
- route of intake
- complications (physical, social, familial, occupational)
- attempts to leave the drug (abstinence)
- reasons for relapse

B) Instruments / Questionnaires: This provides a more structured way of assessment. For assessment of dependence in tobacco users, there are simple tools/questionnaires which can be applied easily and in a very short period of time by any person. Some of them are mentioned below:

i) CAGE Questionnaire:

This simple tool is very useful for screening person with any addictive disorders and can be applied in very short span of time. It is suitable for use in community settings. It has four components which is framed into questions with answer in “Yes” or “No”.

a) Cut Down
b) Annoyed
c) Guilt
d) Eye Opener

Two or more of “Yes” response will qualify a person for tobacco dependence and need for treatment (See in Box)

<table>
<thead>
<tr>
<th>CAGE Questionnaire</th>
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<tbody>
<tr>
<td>A) Have you ever felt a need to cut down or control your smoking, but have difficulty doing so?</td>
</tr>
<tr>
<td>B) Do you ever get annoyed or angry with people who criticize your smoking or tell you that you ought to quit?</td>
</tr>
</tbody>
</table>
C) Have you ever felt guilty about your smoking or about you did while smoking?
D) Do you ever smoke within half an hour of waking up (eye opener)?

ii) The Fagerstrom test for Nicotine dependence is another standard instrument used as a screening test to assess the severity of nicotine dependence. There are scales for both smoking and smokeless tobacco. Based on the score, the level of addiction can be low (score less than 4), medium (score 4-6) or high (score more than 6).

C) **Objective methods** such as measurements of the concentration of nicotine or its metabolite, cotinine, in blood, urine, or saliva is often used in research as an objective index of dependence because it provides an accurate measure of the quantity of nicotine consumed, which itself is a marker of dependence. Carbon monoxide concentration of expired air is a measure of smoke intake over preceding hours; it is not as accurate an intake measure as nicotine based measures, but it is much less expensive and gives immediate feedback to the smoker.

Diagnosis ICD 10 of World Health Organization (WHO) and DSM V of American Psychiatric Association (APA) have independently proposed a cluster of factors to make a uniform diagnosis of tobacco use disorders.

Dependence: It requires presence of 3 of following in past 1 year:

---

**Criteria for diagnosing Substance Dependence (Three or more should be fulfilled)**

- Tolerance
- Withdrawal
- Loss of control
- Preoccupation with substance use
- Continued use in spite of harm
- Craving (Strong desire to use)
3.9 TREATMENT OF TOBACCO DEPENDENCE

Tobacco dependence is a chronic condition that often requires repeated interventions. Because effective tobacco dependence treatments are available, every patient who uses tobacco should be offered at least one of these treatments. Tobacco dependence treatments are both clinically effective and cost effective in relation to other medical and disease prevention interventions.

3.9.1 Non Pharmacological Management

A variety of behaviour therapies, ranging in complexity from simple advice offered by a physician or other health care providers so much more extensive therapy offered by counselors, have been shown to be effective for tobacco cessation. The persons can be helped to identify high risk situations, avoid them and manage withdrawal. Self help tips help patients to overcome and manage the use of tobacco.

Various approaches/ methods are described below

Brief Intervention (DGHS, 2011) – This consists of advice to stop using tobacco, given to all tobacco users, usually during the course of a routine consultation or interaction. Explain clients following benefits of leaving nicotine.

Begin this way- From the moment you quit smoking, it only takes 20 minutes for your body to start undergoing beneficial changes.

- 20 Minutes: Blood pressure drops to normal; pulse rate drops to normal; temperature of hands and feet increases to normal.
- Within 8 Hours: Carbon-monoxide level in blood drops to normal; oxygen level in blood becomes normal.
- Within 24 Hours to 48 hours: Chance of heart attack decreases. nerve endings start regenerating; ability to smell and taste begins to improve.
- Within 72 hours: Bronchial tubes relax, making breathing easier.
- Within 2 Weeks to 3 Months: Circulation improves, lung function increases up to 30%
- Within 6 Months: Coughing, sinus congestion, fatigue and shortness of breath decrease. The lungs function better, as congestion reduces, so does the chance of infection.
- Within 1 Year: Risk of coronary heart disease decreases to half that of a smoker.
- Within 10 Years: Risk of dying from lung cancer is reduced to half.
- Within 15 Years: Risk of dying from a heart attack is equal to a person who never smoked

Behavioural Support – This involves support, other than medications, aimed at helping people stop their tobacco use. It can include all cessation assistance that imparts knowledge about tobacco use and quitting, provides support and teaches skills and strategies for changing behaviour.

Basic knowledge, certain competencies and skills are required to provide effective counseling for tobacco cessation.
Strategies For Tobacco Cessation - The 5 “A”S and 5 “R”S

The Five A’s (Ask, Advise, Assess, Assist and Arrange) and Five R’s (Relevance, Risk, Rewards, Repetitions, Roadblocks) is a five to fifteen minute research based counseling approach that has proven global success.

The Five A’s Approach

STEP 1: ASK

tobacco-use status be queried and documented at every visit.

STEP 2: ADVISE

A clear strong personalized message should be given to all tobacco users to quit”. It is important to tell the tobacco user about the benefits of quitting.

STEP 3: ASSESS

Assess two things

i) Level of dependence

ii) Readiness for change: Determine willingness to make a quit attempt and offer help as per the stages of change in which client is.

a) Not ready (Pre contemplation)

These tobacco users are not seriously considering quitting in the near future. They only see the positive aspects of tobacco and do not like to acknowledge the disadvantages. Encourage such a person to think about his/her tobacco use and make an offer of help. Offer them written information on the harms of tobacco use and benefits of quitting.

b) Unsure (Contemplation)

These tobacco users are seriously considering quitting in the near future. This group is particularly amenable to brief motivational interviewing. Talk to them about the relevant health effects of tobacco use and barriers to cessation.

c) Ready (Preparation)

These tobacco users are planning and ready to quit and have usually made a 24-hour quit attempt in the past year. This group is motivated to quit soon and is the group most likely to attempt to quit in the near future.

d) Action

These are former tobacco users who have quit in the last 6 months. This is when the risk of relapse is highest with about 75% of relapses occurring in this stage, within the first week. This is a period where support and strategies to prevent relapse are important. If relapse occurs, it is important that this should not be seen as failure, but considered a learning experience and as part of quitting process.

e) Maintenance

These are tobacco users who quit for more than 6 months. The non-tobacco use behaviour is established and the threat of tobacco use gradually diminishes. The chances of relapse diminish over time.
STEP 4: ASSIST

The following strategies are suggested to assist tobacco users in motivational stage:

<table>
<thead>
<tr>
<th>Action</th>
<th>Strategies for implementation</th>
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</table>
| help in making a QUIT PLAN. | Preparations for quitting:  
Set a quit date; ideally, the quit date should be within 2 weeks.  
Tell family, friends, and co-workers about quitting, plan and seek their support.  
Anticipate challenges to planned quit attempt, particularly during the critical first few weeks. These include nicotine withdrawal symptoms.  
Remove tobacco products from surroundings.  
Avoid – Avoid Smoking or Using tobacco in places where a lot of time is spent e.g. work place.  
Avoid all forms of tobacco, do not substitute one tobacco product for another. |
| Provide practical counseling (Problem solving / skills training) | Past quit experience-Identify what helped and what failed in previous quit attempts.  
Anticipate triggers or challenges in upcoming attempt – discuss challenges and how user will successfully overcome them.  
Alcohol: The tobacco user should consider limiting/abstaining from alcohol while quitting.  
Other tobacco users in the household/ workplace - Quitting is more difficult when there is another smoker/ tobacco user in the household/ workplace. Other housemates/ coworkers/ peers should also be encouraged to quit. |
| Provide intra-treatment social support. | Provide a supportive environment by encouraging tobacco users in their quit attempts. |
| Help in obtaining extra-treatment social support. | Provide help in developing social support for quit attempt in the environment outside of treatment. “Ask your spouse / partner, friends and coworkers to support you in your quit attempt.” |
| Recommend Pharmacotherapy. | Explain how the medications improve success rates and reduce withdrawal symptoms. |

STEP 5: ARRANGE

Arrange or schedule a follow-up. Follow up contact should occur soon after the quit date, preferably during the first week. A second follow up contact is recommended within the first month. Follow up visits after advice to quit have been shown to increase the likelihood to successful long term abstinence. During the follow up, quitters have some common withdrawal problems and a solution should be suggested accordingly.

PERSONS WHO ARE NOT WILLING TO QUIT TOBACCO

THE 5 “R”s APPROACH

For tobacco users who are not ready to make a quit attempt, provide a brief intervention designed to promote the motivation to quit and information about harmful effect of tobacco. The tobacco user may have fears and concerns about quitting, or may be demoralized because of previous unsuccessful attempts and relapse. This group may respond to a motivational intervention build around the 5 “R”s; i.e. Relevance, Risk, Rewards, Roadblocks and Repetition. It is designed to educate, reassure and motivate the client to quit tobacco use.
Algorithm of stepwise management of tobacco cessation (three tier approach)

It was developed as a part of WHO tobacco cessation programme and currently is also being used in the community settings and has been found to be of great clinical use. Algorithm promotes individualisation of treatment as per severity of tobacco dependence. If low level of dependence, then start with self help tips and followed by behavioural interventions and if it fails then only pharmacological management to be considered. However, if dependence is of higher level then directly patient can be started with pharmacological management along with behavioural interventions.

3.9.2 Pharmacological Management

Pharmacological effects of nicotine play a crucial role in tobacco addiction, and pharmacotherapy has to address this component of tobacco dependence. A pharmacological treatment for smoking cessation should both block the positive reinforcing effects of nicotine and prevent or reduce the development of withdrawal symptoms.

Nicotine Replacement Therapy (NRT)

Nicotine replacement therapy (NRT) acts in several ways; it relieves craving and withdrawal symptoms, which are relieved with relatively low blood nicotine levels, and causes positive reinforcement for arousal and stress relieving. Nicotine replacement products are available in a number of forms, including gum, transdermal patch, nasal spray, lozenge, and inhaler. The various forms of nicotine replacement therapy differ in
Addictions

terms of route of administration and speed of absorption, as well as in the extent to which they offer a situational response to craving and a behavioural ritual to replace the rituals of cigarette smoking. None gives the high concentration arterial bolus of nicotine characteristic of cigarette smoking, and the overall dose of nicotine they provide is typically only one-third to one-half of that from cigarettes. This, coupled with the absence of toxic tar and gas phase components of cigarette smoke, gives them a reassuring safety profile.

Gum is available in 2 mg and 4 mg (per piece) doses. For those smoking <25 cigarettes per day, the 2-mg dose is recommended; for >25 per day, the 4-mg dose is recommended. Gum should be used for up to 12 weeks, no more than 24 pieces per day. Dosage should be tailored to the individual patient. NRT should be used cautiously in cardiovascular patients, common adverse effects are soreness and jaw-ache.

The efficacy of nicotine replacement therapy appears to be largely independent of other elements of treatment. Although absolute success rates are higher with more intensive behavioural support, the effect of nicotine replacement therapy in doubling the chance of quitting is found in brief interventions and over-the-counter.

### 3.10 NON-NICOTINE PHARMACOLOGICAL TREATMENTS

1) **Bupropion**, an atypical antidepressant with some noradrenergic and dopaminergic activity, became the first non-nicotine medicine licensed for smoking cessation in the United States, Canada, and Mexico. The mechanism of action appears not to be related to the drug’s antidepressant effect but rather to pathways common to addiction. Clinical trials, among non-depressed smokers, have shown clear advantage over placebo, and there is evidence that bupropion and the nicotine skin patch have additive effects in enhancing outcomes.

2) **Varenicline** a new drug has sown promising results in patients with nicotine dependence. It is more effective than 24-hour NRT and bupropion. Like NRT and bupropion, varenicline significantly reduces nicotine withdrawal symptoms, and there is also evidence it makes smoking less rewarding so may help prevent ‘slips’ develop into full relapse.

3) **Clonidine** is one of the medication that is effective but having too many side effects and not in use.

**Combination Therapy**

Combined behavioural and pharmacological therapies appear to be the best approach for treating tobacco dependence. Because these therapies operate by different mechanisms, complementary and potentially additive effects may be expected. Nicotine Replacement Therapies (NRT) combined with supportive counseling are the most widely used and intensively reached treatment method. Although self help strategies alone marginally affect quit rates, individual and combined pharmacotherapies and counseling either alone or in combination can significantly increase cessation.

### Self Assessment Questions 3

1) What are the methods of assessment of tobacco dependence?

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### LET US SUM UP

Tobacco dependence or addiction has a huge cost on our population in terms of reduced manpower, decreased productivity, impaired relationships and mortality. Significant progress has been made in understanding the relationships among nicotine’s behavioural, subjective, physiologic, and neuroregulatory effects. Moreover, this type of scientific research on nicotine dependence has led to improved techniques for reducing tobacco use. Guideline researches conclude that first-line medications, including bupropion and nicotine replacement therapies, should be used in conjunction with behaviourally based counseling to produce optimal outcomes in smoking cessation. Despite the development of new medications and their increasing availability over the counter, treatment challenges remain.

### ANSWERS TO SELF ASSESSMENT QUESTIONS

#### Self Assessment Questions 1

1. Addiction usually refers to repetitive pattern of a behaviour or substance use irrespective of its harmful consequences. Whereas drug depnendence usually refers to a syndrome characterised by physiological, cognitive, somatic, psychological set of symptoms associated with use of a particular substance. It is associated
Addictions

with craving, tolerance, withdrawal and use despite harmful consequences of the same.

2) Tobacco is used in a wide variety of ways such as smoking, chewing, applying to gums, sucking and gargling.

3) Tobacco is used in smokeless manners in a wide variety of ways with multitude products such as betel quid, mixture of tobacco, lime areca nut, tobacco with lime, mishri, mawa, gutkha and many others.

**Self Assessment Questions 2**

1) The physical health hazards associated with the use of tobacco are Respiratory diseases: chronic obstructive pulmonary disease, pneumonia, bronchitis, Oral lesions: leucoplakia, erythroplakia, Oral submucosal fibrosis, oral cancer, Cancerous lesions: carcinoma involving bladder, cervix, oesophagus, stomach, kidney, larynx, lung, pharynx, Heart & blood vessel disease: coronary heart disease, peripheral vascular disease; and Sexual dysfunction: erectile dysfunction, infertility, decrease sperm counts.

2) Following are the signs of nicotine withdrawal:
   i) Irritability, frustration or anger
   ii) Anxiety
   iii) Difficulty in concentrating
   iv) Increased Appetite
   v) Restlessness
   vi) Depressed mood
   vii) Insomnia

**Self Assessment Questions 3**

1) The methods of assessment of tobacco dependence are Clinical examination and interview, Instruments or Questionnaires, and Objective methods.

2) The components of the CAGE questionnaire are, Cut Down, Annoyed, Guilt, and Eye Opener.

3) The Five A’s are Ask, Advise, Assess, Assist and Arrange.

4) Risk, Roadblocks.

**3.12 UNIT END QUESTIONS**

1) Discuss the causes of tobacco dependence.

2) Describe the various assessment methods of tobacco dependence.

3) Explain the non-pharmacological management of tobacco dependence.

4) How will you assist tobacco users in the motivational stage?

5) Discuss pharmacological management of tobacco dependence.


UNIT 4 GAMBLING, INTERNET AND OTHER ADDICTIONS

4.1 INTRODUCTION

Behavioural addiction is a new emerging concept. Newly emerging knowledge about the human brain suggests that the reward system operates not only in response to chemical stimulation, but also to the experiential behaviour. Thus the human beings are also liable to develop addiction to certain behaviours as well as daily activities. Such behaviours may include shopping, exercise, sex, gambling, internet and many more.

The World Health Organization discourages the use of term addiction and has substituted it with dependence. Dependence refers to repeated use of a psychoactive substance or substances, to the extent that the user (referred to as an addict) is periodically or chronically intoxicated, shows a compulsion to take the preferred substance (or substances), has great difficulty in voluntarily ceasing or modifying substance use, and exhibits determination to obtain psychoactive substances by almost any means. Typically, tolerance is prominent and a withdrawal syndrome frequently occurs when substance use is interrupted. The life of the addict may be dominated by substance use to the virtual exclusion of all other activities and responsibilities. A person may develop dependence to a wide variety of psychoactive substances like alcohol, barbiturates, opioids, cannabis, benzodiazepines, stimulants, and so on. The topic has been discussed in Unit 2 in detail. In line with drug dependence, behavioural addiction, also called process addiction or “non-substance-related addiction” may be defined as a repeated tendency by an individual to engage in some specific activity, despite harmful consequences, as deemed by the user himself to his individual health, mental state, or social life. It includes usages of internet, mobile, social networking sites, pornography, gambling etc. The rationale for the existence of this category is that compulsive behaviours
follow the same clinical pattern, and may even derive from the same neural network as compulsive substance use.

In this Unit, you will learn about the behavioural addictions such as gambling, internet etc.

4.2 OBJECTIVES

After studying this Unit, you will be able to:

- describe the characteristic features of behavioural addiction;
- describe types of behavioural addictions;
- know the important characteristics of gambling and internet addictions;
- know the prevalence of various behavioural addictions;
- discuss the factors causing behavioural addictions; and
- know the intervention strategies for dealing with behaviour addictions.

4.3 CHARACTERISTIC FEATURES OF BEHAVIOURAL ADDICTION

Essential feature of behavioural addiction is the failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or to others. Characteristic features of the behavioural addictions are described as below:

- Salience – Salience occurs when a particular activity becomes the most important activity in a person's life and dominates thinking (preoccupations), feelings (cravings), and behaviour (deterioration of socialized behaviour).
- Mood modification – Behaviour modifies the mood and provides pleasure, comfort and may be relaxing.
- Tolerance – Increasing the use or engagement in a particular activity is required to achieve the same effect.
- Withdrawal symptoms – Experiencing unpleasant feeling states and/or physical symptoms subsequent to discontinuation.
- Conflict – Behaviour may lead to conflicts between the users and those around them (interpersonal conflict), conflicts with other activities (job, social life, hobbies and interests) or within the individual themselves (intrapsychic conflict).
- Relapse – There is a tendency for repeated reversions to earlier patterns of the particular activity after a period of abstinence.

Salient features of the behavioural addictions may be described by 4 Cs as follows:

**Craving:** User often thinks about the particular activity (e.g., internet), while s/he is engaged in other activities.

**Control:** Addicted users feel difficulty in controlling/ stopping the use/ engagement in the particular activity.

**Compulsion:** Person keeps himself/ herself engaged in the particular activity though there are other things to do.
**Consequences:** Person experiences problems in academic, interpersonal, and occupational area, and suffers psychological distress due to excessive engagement in the particular activity.

Behavioural addiction has certain similarities to substance addiction, as depicted in Table 1.

**Table 1. Similarities between Substance Dependence and Behavioural Addiction**

<table>
<thead>
<tr>
<th>Category</th>
<th>Substance Dependence</th>
<th>Behavioural addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craving</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tolerance/loss of control</td>
<td>Yes, increased amount to achieve the same effects</td>
<td>Yes, loss of control</td>
</tr>
<tr>
<td>Withdrawals</td>
<td>Physical and psychological</td>
<td>Psychological: restlessness/irritability on discontinuation or on being asked to stop</td>
</tr>
<tr>
<td>Consequences</td>
<td>Dysfunctions in physical and psychosocial areas</td>
<td>Dysfunction in psychosocial areas</td>
</tr>
</tbody>
</table>

Thus symptoms common to behaviour addictions includes mood swings, gaining feeling of euphoria from the activity, compulsive need to act out the behaviour, obsessive thinking about and planning the behaviour and allowing the behaviour to take precedence over work, health, and family.

**Self Assessment Questions 1**

1. What is behavioural addiction?
   
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2. What are the 4 C’s of behavioural addiction?

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**4.4 TYPES OF BEHAVIOURAL ADDICTION**

Different types of behavioural addictions include gambling, internet addiction, cellphone addiction, eating addiction, shopping addiction, exercise addiction, sex addiction, work addiction, etc. Out of these, only gambling disorder finds a place in DSM-5 and ICD 10. DSM-5 has included internet gaming disorder as a condition needing further study. Important characteristics of these behavioural addictions are briefly discussed as below.

**Gambling disorder or problem gambling**

Problem gambling refers to an urge to gamble despite harmful negative consequences or a desire to stop. It can be defined as placing something of value at risk with the belief of gaining something.
It can occur on different levels and goes through different phases. Level of gambling are: Level 0 person who did not gamble; Level 1 refers to social or recreational gambling and does not leads to any significant problem; Level 2 referred as at-risk gambling or problem gambling; Level 3 associated with significant psychosocial dysfunctions. It meets the DSMIV-TR criteria of pathological gambling (Hollander 2008).

The different phases of gambling are as follow:

Winning Phase: The individual uses gambling as a way to get excitement or to manage the stressor. The person wins lots of game during this phase or makes money by winning.

Losing Phase: The person remains preoccupied with gambling or to bet more to reduce the loss.

Desperation phase: The person start experiencing health and relationship problems as well as hopelessness & desperation due to gambling. H/she keeps fantasizing about the winning and indulges in crimes to support the gambling.

Hopeless phase: The person starts entertaining the depressive ideas about future, his or her abilities to overcome the current problems and leads to psychological problems.

Thus pathological gambling is characterized by persistent and recurrent problematic gambling behaviour leading to clinically significant impairment or distress. The person has a pathological need to gamble with increasing amounts of money in order to achieve the desired excitement. Gambling disorder has been included in DSM-5 under non substance related disorders.

Attempts to reduce or stop gambling lead to irritability or restlessness. The person might have made multiple unsuccessful attempts to control, cut back or stop the behaviour. There is a preoccupation with gambling, persistent thoughts of reliving past gambling experiences, planning the next venture, and thinking of ways to get money with which to gamble. The person often gambles, whenever distressed. After losing money in gambling, the person returns another day to chase one’s losses. Lying to conceal the extent of involvement in gambling is common. The behaviour may affect adversely different aspects of life like education, employment or relationships. The person often relies on others to provide money to relieve desperate financial situation caused by gambling.

Internet Addiction or Internet Gaming Disorder

In the last two decades, internet has rapidly become a way of life. One of its effects has been excessive use of internet to the extent of neglect of all other interests and responsibilities. One may become addicted to internet. Though internet addiction is not recognized as a formal psychiatric disorder, recently, the American Psychiatric Association has included internet gaming disorder as condition needing further study in the 5th edition of its Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5), before it is recognized as a disorder. It is important to mention here that internet gaming has gradually become a booming market.

DSM-5 has defined internet gaming disorder as persistent and recurrent use of internet to engage in games, often with other players, leading to clinically significant impairment or distress. Important characteristic of the disorder include preoccupation with internet games with previous gaming activity or anticipating playing the next game. This is distinct from internet gambling which comes under gambling disorder. The person gets withdrawal symptoms in form of anxiety, irritability or sadness, when internet gaming is not available. Tolerance is often present with a need to spend increasing amounts of time in internet
gaming. Unsuccessful attempts at controlling the activity may be present. The person loses interests in the hobbies and entertainment activities enjoyed earlier. Use of internet continues despite knowledge of associated psychosocial problems. The person may deceive his/her family members, therapists and others regarding the amount of internet gaming. The activity is indulged in to escape or relieve a negative mood. The behaviour has often resulted in relationship problems and affected education or career adversely. DSM-5 does not include use of internet activities in business or profession, recreation or sexual internet sites as indicative of internet gaming disorder.

Thus internet addiction can be described as a maladaptive pattern of internet use, characterised by psychological dependence, withdrawal symptoms when off-line for prolonged periods, loss of control, compulsive behaviour, and clinically significant impairment of normal social interactions or distress.

The criterion proposed for internet addiction disorder are as follows (Young 1999):

1) **Preoccupation**: a strong desire for the internet
2) **Withdrawal**: discontinuation leads to dysphoric mood, anxiety, irritability
3) **Tolerance**: marked increase in usages to achieve satisfaction
4) **Difficult to control**: persistent desire and/or unsuccessful attempts to control
5) **Disregard of harmful consequences**: continued excessive use despite harmful consequences
6) **Social communications and interests are lost**: loss of interests and previous hobbies
7) **Alleviation of negative emotions**: uses as a way of coping
8) **Hiding from friends and relatives**: deception of actual costs/time to maintain habit

**Cell Phone addiction**

Mobile or cell phone addiction has also attracted the attention of behaviour scientists, though it is not recognized as a formal disorder. Excessive use is likely to be associated with a loss of sense of time or a neglect of basic drives. A person apparently addicted to cell phone use may report feelings of anger, tension and/or depression on not being able to use it, especially when the phone or network is inaccessible. Tolerance to the use may be seen including the need for new and better cell instrument, more software or more hours of use. Other negative repercussions include lying, arguments, poor achievement, social isolation and fatigue.

Important characteristics of cellphone addiction include excessive use, manifested in both high economic cost and in numerous calls and messages; problems, especially with parents, associated with excessive use of mobile phones; interference with other school or personal activities; a gradual increase in use to obtain the same level of satisfaction as well as the need to replace functioning devices with new models; and emotional alterations when the use of the phone is impeded.

**Shopping Addiction/ Compulsive Buying**

Shopping addiction is characterised by excessive spending behaviour which is poorly controlled, markedly distressful, time-consuming, and results in familial, social, vocational, and/or financial difficulties.
Compulsive buying was included as an impulse control disorder in DSM-III-R, but was excluded from DSM-IV and DSM-5. The behaviour is characterized by maladaptive buying or shopping impulses or behaviour, as indicated by frequent preoccupation with buying or impulses to buy that is experienced as irresistible, intrusive, and/or senseless and frequent buying of more than can be afforded. The buying preoccupations, impulses, or behaviours cause marked distress. The behaviour does not occur exclusively during periods of hypomania or mania.

**Eating Addiction**

Eating disorders and eating pathology are characterized by maladaptive attitudes, behaviours, and intrapsychic experiences around eating, weight, and body image that cause significant distress or impairment. According to DSM-IV TR, eating disorders fall into three primary categories - anorexia nervosa, bulimia nervosa and eating disorder not otherwise specified.

**Exercising or Obligatory Exercise or AnorexiaAthletica**

It refers to a compulsion for exercise, with guilt and anxiety if the person doesn’t work out. Hausenblas and Downs (2000 a) identify exercise addiction based on the following criteria that are modifications of the DSM-IV TR criteria for substance dependence:

- **Tolerance**: increasing the amount of exercise in order to feel the desired effect, be it “a buzz” or sense of accomplishment;
- **Withdrawal**: in the absence of exercise the person experiences negative effects such as anxiety, irritability, restlessness, and sleep problems;
- **Lack of control**: unsuccessful attempts to reduce exercise level or cease exercising for a certain period of time;
- **Intention effects**: unable to stick to one’s intended routine as evidenced by exceeding the amount of time devoted to exercise or consistently going beyond the intended amount;
- **Time**: a great deal of time is spent preparing for, engaging in, and recovering from exercise;
- **Reduction in other activities**: as a direct result of exercise, social, occupational, and/or recreational activities occur less often or are stopped;
- **Continuance**: continuing to exercise despite knowing that this activity is creating or exacerbating physical, psychological, and/or interpersonal problems.

**Work Addiction**

It refers to working excessively hard and the existence of a strong, irresistible inner drive (McMillan, O’Driscoll, & Burke, 2003). The most widely empirically studied approach to workaholism assumes three underlying dimensions; the so-called workaholic triad consisting of **work involvement** (work involvement is a generalized attitude of psychological environment with work, i.e., being highly committed to work and devoting a good deal of time to it); **drive** (drive is the inner pressure to work which is maintained by internal fulfillment rather than external pressure, i.e., feeling compelled to work because of inner pressures); and **work enjoyment** (work enjoyment is the level of pleasure derived from work, i.e., experiencing work to be pleasant and fulfilling).

**Diagnosis:**

According to Porter (1996), like alcoholism, workaholism is an addiction which is characterised by
1) Excess work behaviour implying the neglect of family, personal relationships and other responsibilities;

2) Distorted self-concept (that is, striving through work for better feelings of self);

3) Rigidity in thinking (that is, perfectionist about work details, non-delegation of tasks);

4) Physical withdrawal into work and anxiety if away from work;

5) Progressive nature (that is, needs increasingly to work more to boost self-esteem and block other feelings)

6) Denial (that is, uses workplace affirmations to offset objections from others).

Sex Addiction

Sexual addictions include **arousal addictions** that stimulate and thrill; **satiation addictions** that ease tension and discomfort; and **fantasy addictions** that escape mundane reality.

Sexual addicts progress through a four-step addiction cycle, which intensifies each time it is repeated.

**Preoccupation stage:** In stage one, the preoccupation stage; the sexual addict’s mind is completely consumed with thoughts about sex. An obsessive search for sexual stimulation is created by this mental state that the addict is in.

**Ritualization stage:** The second stage, ritualization, is the sex addict’s routine or routines that lead up to the sexual behaviour. The preoccupation of the addict is intensified during this stage, which adds arousal and excitement.

**Compulsive sexual behaviour:** During the third stage, compulsive sexual behaviour, the addict participates in the actual sexual behaviour, which he or she is unable to control or stop. Compulsive sexual behaviour is the end goal of preoccupation and ritualization.

**Despair:** In the final stage, despair, the addict experiences a feeling of utter hopelessness because of his or her behaviour and the powerlessness that he or she has over this behaviour. In order to numb the pain that the addict feels after going through this cycle, the addict begins to engage in the preoccupation stage again, which starts the addiction cycle over again (Carnes, 2001).

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**Case Vignette:** A 17 year old boy has excessive use of mobile, internet and laptop for three and a half years. Initially the family was not much concerned about it and thought it as a part of growing up. The boy was watching YouTube for hours, seeing gadgets, new launches about computer hardwares, FaceBook and playing internet games. He started spending 8-10 hours on device (control). He would finish his work to save time for the above activities (craving). At one time he developed dry eyes because excessive watching of YouTube on his small mobile phone screen. Because of his habit of excessive internet use he started doing badly in studies. He became very irritable and started losing his appetite. Teachers started complaining about his lack of interest in class. His friends also complained about his lack of energy (consequences). He started using it even if he is in company of relatives, friend or while watching TV (compulsion).
4.5 EPIDEMIOLOGY

Symptoms of internet gaming disorder and internet addiction can be observed with similar frequency in both men and women (Akman & Mishra, 2010). Male youth are overrepresented in a lot of behavioral addictions, particularly problem gambling (Vitaro et al., 2001). Gambling is more common in older females (McCormack et al., 2003) or those who have disabilities, or too much idle time (McNeill & Burke, 2000; Southwell et al., 2008). However, they are less likely to encounters practical difficulties as a result of their gambling such as arrests, indebtedness, family problems etc. (Petry, 2002). It is hard to establish the extent of sex addiction although estimates range from 3-6% of the population (Carnes, 1999).

Prevalence of internet gaming disorder is unclear because of varying criteria used by different investigators. Higher rates have been reported from Asian countries and in male adolescents 12-20 years of age. There are a large number of reports from Asian countries, especially China and South Korea, but fewer from Europe and North America. Point prevalence in adolescents has been reported up to 8.4% in males and 4.5% in females.

Lifetime prevalence of gambling has been reported to be 0.4-1.0% rates are 0.6% in males and 0.25 in females. Lifetime prevalence in African-Americans is reported to be higher than the White population in USA.

Indian scenario: In India, other than lottery, legal gambling is limited to betting on horse racing. Even though the exact statistics are not known, there is potential for newer behavioral addiction. As of 2010, there were 52 million active users of internet: the usage has gone up from 9.3hrs/week to 15.7hrs/week and around 4% browse through mobiles (Sinha, 2010). Five percent of the youth in the age group 18-25 years have addictive use of social networking sites and 24% have problematic usage of internet (Menon & Sharma 2013; Barathkar & Sharma 2011).

A study by the Indian Council of Medical research (Sharma, Benegal, Rao & Thennarasu 2013) on 2755 subjects in age group of 18 to 65 years from low to higher socioeconomic status (interviewed using door to door survey methodology) from an urban locality in Bangalore revealed that addictive use was present in 1.3% (2% males & 0.6% females) for internet; 4.1% (5% males & 3.1% females) for mobile phones; 3.5% for social networking sites; 4% (male-3.2% & female-4.8%) for shopping; 0.2% for sex/online pornography and 1.2% (offline & online) had gambling addiction. Statistically significant differences were observed in relation to family status for internet and Facebook addictions. It was more among singles, unmarried and lesser in joint families. The number of years of marriage had a negative correlation with shopping, sex, mobile, internet and Facebook addiction. Physical (eye strain)/Psychological distress (decrease sleep, irritability and restlessness) were present in 6.8% subjects with mobile phone users, in 4.2% with internet use and in 3% of those with social networking sites.

Addictive use of video game/Facebook is reported in 7% of the subjects in age group of 13-17. It was also associated with psychological distress as well as unawareness to handle the online sexual content. This leads to dysfunctions in areas of academic, social life and losing out recreational activities. Parent shown lack of awareness about teenagers online behaviours (Sharma & Shyam 2014).
Self Assessment Questions 2

1) What is pathological gambling?
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2) Describe briefly important features of internet gaming disorder?
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4.6 FACTORS CAUSING BEHAVIOURAL ADDICTIONS

Let us now see the various factors responsible for causing behavioural addictions.

- **Substance dependence:** One of the strongest correlates of problem gambling, and of other process addictions like sex addiction, is substance abuse (Bourget et al., 2003). People who abuse substances (especially those who use heroin, methadone or cocaine) are 4 to 10 times more likely than the general population to have a gambling problem (Ledgerwood & Downey, 2002). Most commonly the substance abuse predates the process addiction, but sometimes the process addiction begins first, or both concerns arise simultaneously (Kausch, 2003).

- **Other behavioural addictions:** Some theorists believe that tolerance for one kind of behavioural addiction breeds increased tolerance for other kinds, i.e., cross-tolerance (Carnes et al., 2005). Problem gambling, for example, frequently occurs along with other process addictions, particularly an involvement with risky sexual practices. Process addictions go together, substitute for one another and reinforce one another (Vitaro et al., 2001).

- **Poor impulse control (“impulsivity” or “impulsiveness”) and risk-taking:** Poor impulse control has been linked to abuse of most substances as well as most of the process addictions. By giving comparatively free rein to their urges, people who are impulsive may expose themselves to multiple risks, including substance abuse, unsafe sexual practices and problem gambling. The particular risky behaviours can become so interchangeable that some theorists prefer to think in terms of a “problem behaviour syndrome” rather than focusing on a particular behaviour in isolation (Barnes et al., 2005). Such a concept seems especially apt with regard to youth.

- **Childhood neglect, trauma, physical or sexual abuse:** Grossly pathological incidents or ongoing conditions in childhood are linked to commensurately negative outcomes later in life, including problem gambling (Moore & Jadlos, 2002).

- **Psychiatric issues:** Process addictions such as problem gambling tend to coexist...
with other psychiatric disorders like depression, personality disorders and substance use disorders (Petry, 2005).

- **Social deprivation (poverty, marginalization):** Social and economic marginalization may increase the risk of behaviouraladdictions.

- **Age and gender:** Males are overrepresented in a number of problem behaviours, particularly problem gambling and substance abuse. Youth who experience problem gambling typically begin gambling quite early in life (Pagani et al., 2009). The older adults who experience problem gambling are more likely to be females who lack a life partner, have too much idle time, and have disabilities (McNeilly & Burke, 2000). However, they are less likely to encounter practical difficulties as a result of their gambling (arrests, indebtedness, family problems, etc.).

**Case vignette**

*A 16 year old boy who dropped out of school sought treatment for irritability, anger outbursts and sleep disturbance. On case evaluation, it was found that the boy was involved in excessive use of internet/YouTube and gaming for the last three years. However, irritability, anger outburst and sleep disturbance preceded the excessive use of internet/YouTube and gaming. He had also initiated the use of alcohol and cigarette in company of friends. This would increase, whenever he was restrained or advised not to use internet/YouTube and gaming. His personality was characterized by low frustration tolerance and oppositional behaviour. Significant family disturbance was present secondary to his excessive use of internet/YouTube and gaming.*

### 4.7 ASSESSMENT OF BEHAVIOURAL ADDICTION

Assessment includes three important steps:

1) **Take a detailed history**

2) **Assess for associated psychiatric illnesses, substance use and risk factors**

3) **Assess motivation for treatment**

One should look specifically into the following issues (Littman-Sharp, 2004):

- Precipitating factors

- Current level of functioning

- Relationships and work situation

- Legal situation, especially if there is history of gambling

- Physical and mental health, both history and current problems

- Past treatment

- Crisis issues (particularly potential for harm to self or others)

- Motivation level and treatment goals

One can inquire along the following lines.

- On what days do you typically get connected to the internet? What time of the day do you usually sign in to the internet?
● How long do you usually stay connected in a typical login?
● Where do you usually use the computer?
● What functions of the internet/social networking sites are you using?
● How many hours on average do you allocate for each function in a week?
● Can you list the functions you use from the most important one to the least important one?
● What aspects of each function do you like the most?
● What do you think your problem exactly is, how do you interpret it?
● What are the effects of social networking sites on your living environments?
● What made you decide to take treatment now? (at his/her own will, directed by his/her relatives, changed social roles, coincidence)
● How long can you keep away from getting connected to the social networking sites when you feel the desire/urge to get connected to it?
● How long you can tolerate boredom?
● How did your social networking sites start and continue? (may have started after a loss).
● What are the factors affecting the continuity of your usage of social networking sites? (alcohol, substance use, presence of others).

One needs to find out whether the users are dependent on a specific function of the internet, because constant and frequent use of a particular function may trigger internet addiction. This also helps in planning suitable interventions (is it a specific internet addiction or a general one?).

The following case vignette describes the details one needs to elicit while assessing a client with internet addiction.

**Case Vignette**

A 19 year old male, educated up to 12th standard, presented with complaints of increased use of social networking sites for the last four years. Further history revealed normal developmental milestones, average academic record and absence of high risk behaviours. There was an increasing use of video games for the last four years. He was spending 6-7 hours per day on video games and neglecting his academics. Initially, he would use internet at home on mobile phone or computer and later in the internet cafes, when his parents starting objecting. He also started stealing and lying to support his habit. The enjoyment rewards earned on winning a game, using free time and fighting boredom were the maintaining factors for the behaviour.

There are various questionnaires and scales that can be used to assess the behavioural addictions. These are,

**Readiness to change Questionnaire** (Rollinck 1992).

**Internet addiction test:** It is a 20-item questionnaire based on 5-point Likert scale to assess addiction to internet (Young, 1995; Widyanto, McMurran, 2004).

**The Lie-Bet Tool:** It is two items questions tool, used to rule pathological gambling behaviours (Johnson et al 1988).
**Sex addiction screening test:** It is designed to indicate the presence of sex addiction (Carnes, 1992).

**Eating Addiction test:** The EAT-26 can be used in a non-clinical as well as a clinical setting not specifically focused on eating disorders (Garner et al 1982).

**Work Addiction Test:** It is a 25 items self report questionnaire based on work habit description which measures five functional indicators of work addiction: compulsive tendencies, control, impaired communication, inability to delegate and self worth. It is rated on 4 point Likert scale (Robinson, 1999).

**Facebook Intensity Questionnaire:** It measures Facebook usage beyond simple measures of frequency and duration, incorporating emotional connectedness to the site and its integration into individuals’ daily activities (Ellison 2007).

**Self Assessment Questions 3**

1. What are common psychiatric comorbidities with behavioural addiction?

2. Write the important steps in the assessment of behavioural addiction.

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### 4.8 INTERVENTIONS FOR BEHAVIOUR ADDICTIONS

Interventions include psychoeducation, psychotherapeutic interventions and motivation enhancement, cognitive therapy, behaviour therapy and family oriented therapy.

**Psychoeducation**

The person needs to be educated about the nature of problem, giving information about maintaining factors and negative consequences resulting from it. Self-help material in form of pamphlets can also be given.

**Psychotherapeutic intervention**

Psychotherapeutic intervention includes two approaches: total abstinence or controlled use. Given the internet’s numerous advantages and positive uses in day-to-day life, it is impractical to try the total abstinence model (as in treatment of substance use disorders), even in those who are addicted to the internet. The guiding principle should primarily be ‘moderate and controlled use’. In the abstinence model, the individual abstains from a particular internet application (e.g. using chat rooms or playing games) and uses other applications in moderation. This model of abstinence is recommended for those who have tried and failed to limit their use of a particular application. The intervention starts with collecting information about the initiating factor as well as the maintaining factors.
Motivational enhancement therapy

The subjects are often not much motivated for treatment and motivation needs to be enhanced. Motivational enhancement therapy (MET) is a systematic intervention approach for evoking change in internet addicts. It is based on principles of motivational psychology and is designed to produce rapid, internally motivated change. This treatment strategy does not attempt to guide and train the client, step by step, through recovery, but instead employs motivational strategies to mobilize the client’s own change resources.

Motivational interviewing is assisted by motivational balance exercise. To help a person make the decision of change it would be a useful exercise to encourage him/her to consider the advantages and disadvantages of changing and continuing use of internet. This will help him/her understand the need for change after weighing the costs and benefits. To facilitate change from using to not using the internet, one has to tip the balance so that the positives of quitting outweigh the negatives of continuing internet use. This could, in turn, enhance the person’s commitment to change.

Healthy use does not happen in one step – people progress through five stages on the way to successful change:

- Pre contemplation: Not thinking about healthy use in the foreseeable future
- Contemplation: Thinking about changing but not ready to change
- Preparation: Committed to and getting ready to change
- Action: healthy use of technology
- Maintenance: maintaining healthy use.

Movement through the stages occurs as people utilize distinct (virtually universal) processes of change. Progress through the early stages is dependent on particular shifts in the person’s decisional balance, i.e., how they see the pros and cons of quitting. Initiating and maintaining healthy use requires a sufficient sense of confidence – self-efficacy – in one’s ability to actually carry out the actions required to change. People change as they progress through five stages. Helping people change their addictive behaviour involves changing their excessive use of internet/other behavioural addiction as well as enhancing their motivation to maintain them.

Patients unwilling to make a quit attempt during a visit may lack information about the harmful effects of information technology/behavioural addiction. They may have fears or concerns about control use. Such patients may respond to a motivational intervention that provides the clinician an opportunity to educate, reassure, and motivate such as the motivational intervention built around “5 R’s”: relevance, risks, rewards, roadblocks, and repetition.

**Relevance:** Encourage the patient to indicate why quitting is personally relevant. One should be as specific as possible. Motivational information has the greatest impact if it is relevant to a patient’s disease status or risk, family or social situation (e.g., decrease communication), health concerns, age, gender, and other important patient characteristics (e.g., personal barriers to develop control use).

**Risks:** Ask the patient to identify potential negative consequences of excessive use of information technology addiction/indulgence in other behaviours (gambling, shopping, etc.).

**Rewards:** The clinician should ask the patient to identify potential benefits of controlled use of information technology/change in engagement of other behaviours (gambling,
sex, shopping etc). The clinician may suggest and highlight the benefits that seem most relevant to the patient.

**Roadblocks**: The clinician should ask the patient to identify barriers or impediments to control use and note elements of treatment (problem solving, pharmacotherapy) that could address barriers.

**Repetition**: The motivational intervention should be repeated every time an unmotivated users visits the clinic setting.

**Brief Intervention**

Brief intervention essentially can be used with many types of behaviour problems. It takes only 5-15 minutes. Steps of brief intervention can be described as 5 A’s:

**Ask** – about information technology use/other addictions and their pattern

**Advice** – Advise to quit. Give a clear, strong, and personalized message

**Assess** – Assess for commitment and barriers to change

**Assist** – the client committed to change. Reinforce commitment to change. Help make a plan and develop strategies to manage triggers. Foresee possible weaknesses in plan and guide for developing and refining plans.

**Cognitive behaviour Therapy**

Cognitive behaviour therapy works on the principle that the addiction is formed once a person feels that he/she does not have any social and family support, thereby developing the so-called maladaptive cognitions and behaviours (which are the mental evaluations or screeners of interpretation) about themselves and the world.

It includes two components: functional analysis and skill training. **Functional analysis** includes triggers/reason for use (e.g. boredom) that lead to a subject’s maladaptive behaviours and the immediate beneficial consequences (e.g., feeling good) that maintained the maladaptive behaviours as well as the structured assessment on internet addiction test. **Skills training** include development of coping style and dealing with various triggers.

The internet user generally believes that the virtual world treats them (i.e. get more pleasure) well in comparison to real world. It manifests in form of all-or-nothing maladaptive cognitions such as “I am respected more in the virtual world”, “I always have to restrain myself or obey my parents/brother in the real world whereas in virtual world I can do anything”. These types of beliefs can be challenged in a therapeutic settings by dysfunctional method of fulfilling the unfulfilled need using virtual field as well as by imparting the skill training to develop alternative pleasurable activities in the real world. It can be done by helping the client to shift from the virtual world to reality. By understanding one’s virtual social link/world and the needs it fulfilled, it can provide insights and facilitate the process of enriching the real lives and reduce their indulgence in the virtual world.

Excessive internet users use avoidant coping/less problem solving styles. Clients can be helped to develop coping strategy based on their strengths and resources, which will help them to expand their offline activities. The clients should be counseled to work on developing alternative pleasurable activities or redevelop their old hobbies.

**Family Oriented therapies**

Family based interventions have also been found useful (Doug 2012). Family members
like parents or the spouse can be included in treatment. Objective is to enhance the understanding of negative consequences of excessive internet use/engagement in other behaviours, strengthen the coping skills and increase prosocial peer behaviours and enhancing parenting practices.

Individual sessions with adolescent focus on facilitating the engaging in treatment and enhancing motivation for alternative behaviours in coping with high risk situations. Individual sessions with parents focus on enhancing the healthy use of internet, increasing the parenting practices, observing the child internet use and other behaviours, explaining the rationale for developing healthy use of technology and setting rule in relation to internet use.

The joint session can focus on parental commitment to the adolescent as well as developing a positive parent-child relationship. It is an essential prerequisite for effective parental monitoring of child internet use.

**Implications**

Bearing in mind the co morbidity of the disorder with other psychiatric illnesses especially depression, anxiety disorders and sometimes even severe mental illnesses, a detailed psychiatric evaluation is necessary. Specific therapy for the behavioural addictions should only be started subsequently. Parents need to be watchful of their wards, since onset is often during adolescence. There is a need to understand the prevalence/pattern/longitudinal work to address the development of these addiction in Indian context & related burden associated with it. It will also help to use standardized tool to assess these addictions and help in developing the specific intervention modules.

### Self Assessment Questions 4

1) What is psychoeducation?

2) What is motivational enhancement therapy?

3) Write the two components included in cognitive behaviour therapy?
4.9 LET US SUM UP

With the newer advances in the field of technology, the young generation becomes hooked onto the internet and cell phone, and develops addiction to these. In response to this recent developments include opening of internet deaddiction centres/ clinics in major cities such as in Bangalore and Delhi for dealing with this new generation disorder. In this Unit, you learned about various types of behavioural addictions, their assessment and intervention strategies. One’s own personality and motivational factors and one’s environmental factors play a crucial role in the causation and consequently, in the intervention of the behavioural addictions.

4.10 UNIT END QUESTIONS

1) What are different types of behavioural addictions?
2) How do we assess a person with internet gaming disorder?
3) What are the psychological causes of behavioural addiction?
4) What are risk factors for behavioural addictions?
5) Discuss the brief intervention method for gambling disorder.
6) Discuss principles of management of behavioural addictions.
7) How would you conduct motivation enhancement in a person with behavioural addiction?

4.11 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) Behavioural addiction, also called process addiction or “non-substance-related addiction” refers to repeated tendency by an individual to engage in some specific activity, despite harmful consequences, as deemed by the user himself to his individual health, mental state, or social life.
2) The 4 C’s of behavioural addiction are Craving, Control, Compulsion and Consequences.

Self Assessment Questions 2

1) Pathological gambling is characterized by persistent and recurrent problematic gambling behaviour leading to clinically significant impairment or distress. The person has a pathological need to gamble with increasing amounts of money in order to achieve the desired excitement.
2) Internet gaming disorder refers to persistent and recurrent use of internet to engage in games, often with other players, leading to clinically significant impairment or distress. Important characteristic of the disorder include preoccupation with internet games with previous gaming activity or anticipating playing the next game.

Self Assessment Questions 3

1) Psychiatric comorbidities with behavioural addiction are depression, personality disorders and substance use disorders.
2) The important steps in the assessment of behavioural addiction include:
   - Take a detailed history
   - Assess for associated psychiatric illnesses, substance use and risk factors
   - Assess motivation for treatment

**Self Assessment Questions 4**

1) Psychoeducation refers to providing information to the client about the nature of problem, giving information about maintaining factors and negative consequences resulting from it.

2) Motivational enhancement therapy (MET) is a systematic intervention approach based on principles of motivational psychology and is designed to produce rapid, internally motivated change. This treatment strategy does not attempt to guide and train the client, step by step, through recovery, but instead employs motivational strategies to mobilize the client’s own change resources.

3) The two components included in cognitive behaviour therapy are: functional analysis and skill training.

### 4.12 REFERENCES


Doug Hun Han, sun Mu Kim, youngSik Lee and Perry F Renshaw (2012). The effect of family therapy on the changes in the severity of on-line game play and brain activity in adolescents with on-line game addiction. Psychiatry Research neuroimaging, 2002(2);126031


4.13 SUGGESTED READINGS


# MPC 053

## MENTAL HEALTH IN SPECIAL AREAS

### BLOCK 1: MENTAL HEALTH IN SPECIAL POPULATION

- Unit 1: Child and adolescent mental health
- Unit 2: Old age and mental health
- Unit 3: Women and mental health
- Unit 4: Marriage and mental health

### BLOCK 2: SPECIFIC ISSUES ON MENTAL HEALTH

- Unit 1: Deliberate self harm and suicide
- Unit 2: Problems related to school
- Unit 3: Problems related to sex
- Unit 4: Problems related to work area

### BLOCK 3: DEVELOPMENTAL DISORDERS

- Unit 1: Mental Retardation
- Unit 2: Specific learning disabilities (Reading, Writing, Maths)
- Unit 3: Other learning disabilities (Cerebral palsy, Multiple disabilities)
- Unit 4: Assessment and certification
- Unit 5: Rehabilitation

### BLOCK 4: ADDICTIONS

- Unit 1: Alcoholism
- Unit 2: Substance abuse and addiction
- Unit 3: Tobacco addiction
- Unit 4: Gambling, internet and other addictions