The International Journal of Indian Psychology
ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)
Volume 5, Issue 1, DIP: 18.01.057/20170501
DOI: 10.25215/0501.057
http://www.ijip.in | October-December, 2017

The International Journal of INDIAN PSYCHOLOGY

**Original Research Paper**

# Drug Addiction: Current Trends and Management

Jyotika Singh[1], Pradeep Kumar Gupta[2]*

## ABSTRACT

Drug addiction has become a worldwide problem and the leading cause of death. The global problem of addiction and drug abuse is responsible for millions of deaths and millions of new cases of HIV every year. In recent years, India is seeing a rising trend in drug addiction. The most common use of drug in India is alcohol, followed by cannabis and opiates. Drug use, whether licit or illicit, causes serious health problems in individuals. The National level survey conducted on drug use in India indicated that prevalence of drug abuse among males in the general population is significant. Drug abuse among women exists. Despite the fact that more men use drugs than women, the impact of drug use tends to be greater on women, because women lack access to care for drug dependence. Economic burden, disturbed family environment, violence, and psychological problems are other consequences of drug abuse in the family. Adolescent drug abuse is another major area of concern because more than half of the person's with substance use disorder are introduced to drugs before the age of 15 years. At present, there exists a significant gap in service delivery. The current paper highlights the causes of drug abuse, and describes the treatment and prevention of drug abuse and addiction for proper management of the problem.

***Keywords:*** *Drug addiction, HIV, Drug abuse, Psychoactive substances, Dependence, Licit drugs, Illicit drugs, Alcohol, Cannabis, Opiates*

***D****rug addiction* is a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences (National Institute on Drug Abuse, 2014). Drug addiction is associated with impairment in various aspects of physical, psychological and socio-occupational functioning. Drug addiction is a growing problem in India and the world. The global problem of addiction and drug abuse is responsible for millions of deaths and HIV cases.

The use of the term "Addiction" has now been dropped from the scientific literature because of its derogatory connotation and instead the use of "Substance use disorder" is preferred. *Drugs* are any chemical (psychoactive) substances that affect physical, mental, emotional or

[1] M. Phil Scholar, Department of Clinical Psychology, IHBAS, Delhi, India
[2] Clinical Psychologist, De-Addiction Centre, Deep Chand Bandhu Hospital, New Delhi, India
*Responding Author

**Received: October 07, 2017; Revision Received: November 06, 2017; Accepted: November 23, 2017**

behavioral states of an individual. *Drug abuse*, a form of substance use disorder is a patterned use of a drug in which the user consumes the substance (drugs) in amount or with method which are harmful.

The pattern of substance use and substance use related syndrome can be described as following -

- ***Substance intoxication*** is a reversible, substance-specific syndrome due to the recent ingestion of a substance of abuse. Signs of intoxication often include confusion, impaired judgment, inattention, and impaired motor and spatial skills.
- ***Tolerance*** is a state of physical habituation to a drug, resulting from frequent use, such that higher doses are needed to achieve the same effect. The person can increase the amount of drug use to the point that can be lethal for non drug users.
- ***Dependence*** is a set of physiological, behavioural, and cognitive symptoms. For an individual when drug use takes much priority over other behaviours that previously had greater value, the person can be called dependent on the drug. Dependence syndrome is characterized by a strong desire or sense of compulsion to take drug, difficulty in controlling drug use behaviour, withdrawal, tolerance, neglect of alternative pleasures and persistent use of drug despite clear evidence of harmful consequences of drug.
- ***Withdrawal syndrome*** (also called an abstinence syndrome) is a cluster of symptoms that occur when a dependent person abruptly stops using a particular substance following heavy, prolonged use. Some common withdrawal symptoms include anxiety, restlessness and body aches while some withdrawal symptoms are drug specific. Thus, withdrawal symptom varies from one drug to another.

**Classification**

ICD-10 classifies substance use disorders under "Mental and behavioural disorders due to psychoactive substance use (F10–F19)" and describes four pattern of substance use – acute intoxication, harmful use, dependence syndrome, and withdrawal state. The codes in this range represent an individual diagnostic code for different psychoactive substances including alcohol, opioids, cannabinoids, sedative hypnotics, cocaine, stimulants, hallucinogens, tobacco, volatile solvents and multiple drug use. Diagnostic guidelines for the different substance induced clinical conditions (e.g., withdrawal state with delirium, Psychotic disorder, and Amnesic syndrome) are also specified. Also, an additional code (F55) exists for abuse of non-dependence producing substances such as aspirin.

The DSM-5 Substance-Related Disorders has eliminated two categories in DSM-IV; Substance Dependence and Substance Abuse now under one category called Substance-Use Disorders. In the substance use disorder chapter the biggest change from the dependence and abuse diagnosis is the move to Mild, Moderate, and Severe. To determine the severity of the disorder, a criteria 1-11 has been established. The presence of 2-3 symptoms out of the 11 is defined as Mild. The presence of 4-5 symptoms is defined as Moderate. The presence of 6 or more symptoms is defined as Severe.

***Types of drugs***

Drugs can broadly be classified into Depressants, Narcotics, Stimulants and Hallucinogens

***a) Depressants (Downers)***

Depressants, also known as sedatives and tranquilizers, are substances that can slow brain activity. These include alcohol, hypnotics to induce sleep, anxiolytic to reduce anxiety, sedatives for relaxation and anticonvulsants such as barbiturates. Alcohol is the most commonly used depressant. Officially, Indians are still among the world's lowest consumers of alcohol— only 21% of men and around 2% of women drink. But up to a fifth of this group amounting to about 14 million people—are dependent drinkers requiring "help". (More et al, 2015). The percentage of the drinking population aged under 21 years has increased from 2% to more than 14% in the past 15 years, according to studies in Kerala by Alcohol and Drugs Information Centre India (NGO). Alarmingly, the study found that the "average age of initiation" had dropped from 19 years to 13 years in the past two decades.

***b) Barbiturates***

Barbiturates such as amobarbital, pentobarbital, phenobarbital, and secobarbital are depressants, or sedatives. These drugs have several medical uses, including easing anxiety and tension, dulling pain, and treating epilepsy and high blood pressure. At the highest risk for prescription drug abuse are anesthesiologists, emergency medicine physicians, family practitioners, psychiatrists and nurses. The ease of access and frequency of exposure to prescription drugs is one factor that increases the probability of these professionals to abuse these drugs. Other factors that contribute to the abuse of prescription drugs include stress, anxiety and depression, often associated with the long working hours and high stress levels of healthcare jobs.

***c) Narcotics***

Narcotics or opioids are drugs that are used medically for pain relief but that have strong addictive potential. Opioids produce a rush, or intense feelings of pleasure, which is the primary reason for their popularity as street drugs. They also dull awareness of one's personal problems, which is attractive to people seeking a mental escape from stress. Their pleasurable effects derive from their ability to directly stimulate the brain's pleasure circuits— the same brain networks responsible for feelings of sexual pleasure or pleasure from eating a satisfying meal (Begley, 2001b).

***d) Stimulants (Uppers)***

Stimulants act on the central nervous system to increase energy and alertness while suppressing appetite and fatigue. They include *cocaine* (such as freebase and 'crack'), *amphetamines* (for example Dexedrine, Benzedrine), *methamphetamine* (methedrine: 'speed', 'crystal', 'ice', 'crank'), *MDMA* (ecstasy), *nicotine*, *caffeine* and amphetamine like products (preludin or Ritalin.) Some of these are discussed below. Continued use of some stimulants can result in changes in how the brain operates and an inability to experience pleasure naturally. For example, chronic use of amphetamines (and cocaine) may result in the temporary loss of approximately 20% of dopamine receptors in the nucleus accumbens, at least for 4 months since the last exposure (Volkow et al., 2001).

***e) Amphetamines***

Amphetamine (contracted from alpha-methylphenethylamine) is a central nervous system (CNS) stimulant. Amphetamines are used in high doses for their euphoric rush. They are often taken in pill form or smoked in a relatively pure form called "ice" or "crystal meth".

Amphetamines are also used for therapeutic purposes e.g., for the treatment of attention deficit and hyperactivity disorder (ADHD), narcolepsy, and obesity. At therapeutic doses, it induces physical effects such as decreased reaction time, fatigue resistance, and increased muscle strength. Larger doses of amphetamine may impair cognitive function and induce rapid muscle breakdown.

***f) Ecstasy***

The drug ecstasy, or MDMA (3,4-methylenedioxymethamphetamine) is a designer drug, similar in chemical structure to amphetamine. It produces mild euphoria and hallucinations and has become especially popular on college campuses and in clubs and "raves" in many cities (Hernandez, 2000; Strote & Wechsler, 2002).

***g) Cocaine***

Cocaine is a natural stimulant extracted from the leaves of the coca plant. Cocaine is usually snorted in powder form or smoked in the form of crack. In 2008, 5.3 million Indians age 12 and older had abused cocaine in any form and 1.1 million had abused crack at least once in the year prior to being surveyed. (NIDA, 2008).

***h) Nicotine***

Nicotine is found in tobacco products including cigarettes, cigars, and smokeless tobacco. Tobacco is used by smoking, chewing, sucking and applying to the teeth and gums etc. In India, there is a wide availability of smoking (e.g., bidi, cigarette, hookah etc) and smokeless tobacco (e.g., gutkha, khaini, zarda). The WHO estimates that 1 billion people worldwide smoke and more than 3 million die each year from smoking-related causes.

Jha *et al (2008)* have estimated that around 1 million deaths a year in India will be attributable to smoking by the early 2010s. India's tobacco problem is very complex, with a large use of a variety of smoking forms and an array of smokeless tobacco products. Many of these products are manufactured as cottage and small-scale industries using varying mixtures and widely differing processes of manufacturing. (Reddy & Gupta, 2004).

Highest prevalence of stimulant injection was observed in the state of Goa, considered as the 'party capital' of India. Though there are no reports in the scientific literature, there have been reports in the popular press suggesting that Goa has become a principal hub of drug trade and consumption in India, potentially due to its relatively unprotected coastline (The Times Of India, 2008).

***i) Hallucinogens***

Hallucinogens, also called psychedelics, are a class of drugs that produce sensory distortions or hallucinations, including major alterations in color perception and hearing. Hallucinogens may also have additional effects, such as relaxation and euphoria or, in some cases, panic. Hallucinogens include lysergic acid diethylamide (LSD), psilocybin, and mescaline. PCP, Marijuana, PCP, LSD are the most commonly used hallucinogens.

***j) Marijuana/Cannabis***

Marijuana is derived from the Cannabis sativa plant. It is generally classified as a hallucinogen because it can produce perceptual distortions or mild hallucinations. It is also known by various street names such as bhaang, gaanja, charas, hashish, pot, weed. Cannabis can produce anxiety, paranoia, and a sense of derealisation. It is the most prevalent illegal

drug used around the world. About 40% of the U.S. population age 12 or older has tried cannabis at least once, and about 10% has tried it within the last year.

***k) PCP (Phencyclidine)***

Phencyclidine was developed as an anesthetic in the 1950s but was discontinued as such when its hallucinatory side effects were discovered. Use of this substance causes hallucinations, accelerates the heart rate and blood pressure and causes sweating, flushing, and numbness. PCP is classified as a deliriant—a drug capable of producing states of delirium. It also has dissociating effects, causing users to feel as if there is some sort of invisible barrier between themselves and their environments. It is also called "angel dust". Its popularity has since waned, largely because of its unpredictable effects.

## ETIOLOGY

### A. Biological perspective

- ***Neurotransmitters***

Many psychoactive drugs increase levels of the neurotransmitter dopamine in the brain's pleasure or reward circuits—the networks of neurons responsible for producing feelings of pleasure or states of euphoria (Nestler, 2005).Over time, regular use of these drugs reduces the brain's own production of dopamine. Consequently, the brain's natural reward system- the "feel good" circuitry that produces states of pleasure associated with the ordinarily rewarding activities of life, such as consuming a satisfying meal and engaging in pleasant activities- becomes blunted (Dubovsky, 2006). In effect, the addict's brain comes to depend on having the drug available to produce feelings of pleasure or satisfaction (Denizet-Lewis, 2006). Ultimately, without drugs, life may not seem to be worth living.

- ***Genetic Factors***

A gene or combination of genes influences the specific biological mechanisms relevant to substance abuse- such as being able to achieve a certain level of intoxication when using drugs, becoming ill at low doses as opposed to much higher doses, or having the capacity to metabolize chemical substances in the body.

Evidence links genetic factors to various forms of substance use and abuse, including alcohol abuse and dependence, heroin dependence, and even cigarette smoking (nicotine dependence) (Feng et al., 2004; Hampton, 2006; Liu et al., 2004; Xu et al., 2004).

The most popular hypothesis regarding neurobiological bases for the addictions is one asserting insufficient dopamine reception. For example, Volkow et al. (2001) suggest that some individuals have relatively fewer D2 dopamine receptors, which might predispose them to fall victim to drug abuse and other addictive behaviors. This notion is consistent with physiological research on individual differences in neurotransmitter receptors.

It has been hypothesized that low levels of D2 receptors may result in a generalized *reward deficiency syndrome* among some individuals (Blum et al., 1990). That is, some individuals, because of their neurochemistry, have difficulty deriving feelings of reward or pleasure from ordinary activities and this predisposes them to seek alternative behaviors to compensate for the lower level of activation of the brain reward circuitry (Noble et al., 1991)

**B. Psychological Perspective**

- ***Reinforcement***

Positive reinforcement occurs when the individual receives a pleasurable sensation and, because of this, is motivated to repeat what caused it. According to this view, the continued use of all drugs that stimulate euphoria is caused by their "extremely potent reinforcing effects" (McAuliffe and Gordon, 1980, p. 137) Negative reinforcement occurs when drug use is discontinued and painful withdrawal symptoms wrack the addicted individual's body. Because the user recognizes that doses of the drug can alleviate these symptoms, an intense craving is generated for the drug over time.

- ***Cognitive viewpoint***

According to cognitive viewpoint, expectancies about the perceived benefits of using alcohol or other drugs and smoking cigarettes directly influence the decision to use these substances (Cable & Sacker, 2006; Mitchell et al., 2006; Park, 2004). Outcome expectancies in teens, that is what they expect a drug's effects will be, are strongly influenced by the beliefs of their peers.

- ***Psychodynamic viewpoint***

According to traditional psychodynamic theory, alcoholism reflects an oral-dependent personality. Excessive alcohol use is associated with other oral traits, such as dependence and depression. Excessive drinking or smoking in adulthood symbolizes an individual's efforts to attain oral gratification. A study of personality factors (Chaudhury S. et al. 2006) among 100 alcohol dependent persons showed significantly high neuroticism, extroversion, anxiety, depression, psychopathic deviation, stressful life events and significantly low self-esteem as compared with normal control subjects.

- ***Socio-cultural Perspective***

Engaging in drug use is determined in part by our environment- where we live, whom we worship with, and the social or cultural norms that regulate our behavior. Studies show that rates of alcohol abuse vary across ethnic and religious groups. Church attendance, for example, is generally connected with abstinence from alcohol. Peer pressure and exposure to a drug subculture are important influences in determining substance use among adolescents and young adults (Dishion & Owen, 2002; Hu, Davies, &. Kandel, 2006). Kids who start drinking before age 15 stand a fivefold higher risk of developing alcohol dependence in adulthood than do teens who began drinking at a later age (Kluger, 2001).

## RISK AND PROTECTIVE FACTORS

*Risk factors* for drug abuse are those diverse factors that contribute to the initiation and continuation of drug use. On the other hand there are certain factors which reduce the risk of substance abuse and promote positive development and known as *Protective factors*.

| Risk Factors | Protective factors |
|---|---|
| Biologically based susceptibility | Family supervision |
| Impulsiveness & Aggression | Having conventional friends |
| Relatively young age at onset of drug use | Placing an importance on high achievement in school |
| Failure in school | Cooperativeness |

| Risk Factors | Protective factors |
|---|---|
| Negative peer influence | Social competence |
| Perception of low risk of engaging in problem behaviors | Neighborhood cohesiveness |
| Chaotic home environments | Lack of drug availability |
| Ineffective parenting (e.g. Permissive/ Negligent parenting) | |
| Lack of attachment to parents | |
| Poor social and coping skills | |
| Poverty | |

Taheri et al (2016) studied factors affecting the tendency for drug abuse in 32 patients presenting to an addiction treatment centre in Iran. Four main themes were extracted through data analysis, including *family factors* (the presence of a drug user in the family, loneliness and separation from the family, and family problems and disputes), *social factors* (having a hard job, unemployment, the lack of access to recreational facilities and the easy access to drugs); *environmental factors* (friendly gatherings and socializing with drug users); and *personal factors* (wealth, illness, curiosity).

The findings of the study showed that *environmental factors* had the greatest effect on the tendency for drug use (38%), followed by *family* factors (28.5%), *personal* factors (22.2%) and *social* factors (11.1%).

## ESTIMATING THE SIZE OF PROBLEM

### *Global Scenario*

According to the World Drug Report of the United Nations Office on Drugs and Crime (UNODC), (2016):

- The number of people classified as suffering from drug use disorders has increased disproportionally for the first time in six years. The figure stands at 29 million people as compared to the earlier figure of 27 million.
- Approximately 27 million people are problem drug users, almost half of whom are people who inject drugs (PWID). About 1.65 million of people who inject drugs were living with HIV in 2013.
- In 2014, 207,000 drug related deaths were reported; an unacceptably high number of deaths which are preventable if adequate interventions are in place.
- Heroin use and deaths related to over dose, appear to have increased sharply over the last two years. Opioids continue to pose the highest potential harm and health consequences among major drugs.
- Cannabis remains the most commonly used drug at the global level, with an estimated 183 million people having used it in 2014. By analyzing trends over several years, the report shows that with changing social norms towards cannabis, its use has climbed in parallel with higher acceptability towards the drug..

- There are high levels of drug use in prison, including the use of opiates and injecting drug use.
- The report notes that men are three times more likely than women to use cannabis, cocaine or amphetamines, whereas women are more likely than men to engage in the non-medical use of opioids and tranquilizers.
- Despite the fact that more men use drugs than women, the impact of drug use is greater on women than it is on men, because women tend to lack access to care for drug use dependence. Within the family context, female partners and children of drug users are also more likely to be the victims of drug-related violence.
- The drug trade is generally seen to flourish where State presence is weak, where laws are unevenly applied, and where opportunities for corruption exist.
- Provision of evidence-based treatment and care services to drug-using offenders, as an alternative to incarceration, has been shown to substantially increase recovery and reduce recidivism.
- The global problem of addiction and drug abuse is responsible for 5 million deaths and about 42 million new cases of HIV every year (Soltani et al, 2013).

**Indian Scenario**

One of the first studies on drug use in India was the *National Survey on Extent, Pattern and Trends of Drug Abuse in India (2000)* with a sample size of 40,697 males (12-60 yrs). Major findings of the study are as following -

- The most used substance was alcohol (21%), followed by cannabis (3%) and opiates (0.7%). The percentage of poly-drug users was 22.3%.
- The onset of drug use was mostly early adulthood (21-30 yrs, 46%).„
- Duration: Majority of the people (53%) had used drugs for more than 5 years.
- Previous treatment: 27% people had sought treatment in the past.
- There was a marked variation in alcohol use prevalence in different states of India. Current use ranged from a low of 7% in the western state of Gujarat (officially under Prohibition) to 75% in the North-eastern state of Arunachal Pradesh.
- Tobacco use prevalence was high at 55.8% among males, with maximum use in the age group 41-50 years.
- Interview conducted on 179 women with drug using family members (in 8 sites) indicated several health, psychological and economic/occupational problems.
- Money spent on treatment is an additional burden. Disturbed family environment and violence are other consequences.

Major conclusions from National Survey on Extent, Pattern and Trends of Drug Abuse in India (2000) were:

- Alcohol, cannabis and opiates are the major substances of abuse in India.
- Prevalence of drug abuse among males in the general population is significant.
- Drug abuse among women exists. Hazards and burden on women due to drug abuse is significant.
- Number of dependent users ‘not in treatment’ is significant.

- Injectable drug use (IDU) and other high risk behaviours are seen both in rural and urban areas.
- There exists a significant gap in service delivery.

**Gender differences**

- Literature on gender differences published over the past three decades has shown that women typically begin using substances later than men and that substance use by women is strongly influenced by intimate partners who also use drugs.
- Women overall may be less likely than men to develop drug-use disorders and dependence. Nevertheless, once they have initiated substance use, women tend to increase their rate of consumption of alcohol, cannabis, opioids and cocaine more rapidly than men (Becker and Hu, 2008).
- Women encounter significant systemic, structural, social, cultural and personal barriers in accessing substance abuse treatment. (Guerrero and others, 2014).
- Women with substance-use disorders tend to have a history of over responsibility in their families of origin and have experienced more disruptions and report more interpersonal conflicts in the family than their male counterparts, particularly issues related to parenting and exposure to childhood and adult trauma.
- Women with substance-use disorders may come from families where one or more family members is also drug dependent and may have suffered victimization and injury.
- Many women identify relationship problems as a cause for their substance use.
- In addition, psychiatric co-morbidities, especially mood and anxiety disorders, are reported to be higher among women (Stewart et al., 2003)

## CURRENT TRENDS

- The latest available data, from 2004, estimates that 10.7 million Indians are drug users: 8.7 million consume cannabis and 2 million use opiates, according to a National Survey Report by the UN Office on Drugs and Crime and the Indian Ministry of Social Justice & Empowerment.
- Mizoram, Punjab and Manipur are among the states where people are most vulnerable to drug abuse. One reason could be their proximity to porous international borders and international drug-trafficking zones, such as the "Golden Triangle" (Myanmar, Thailand and Laos) and "Golden Crescent" (Iran, Afghanistan and Pakistan).
- Shukla (1979) reported that 38.3% of the rural population in Uttar Pradesh was habitual substance users. In a study conducted in rural community in Bihar prevalence of alcohol/drug use was found to be 28.8% of the study population (Jena et al, 1996) .
- The prevalence estimates ranged from 0.94 per 1000 population in the earlier studies to 350 per 1000 population in more recent ones (Ghulam and Rehman, 1996). The focus of these studies varied from use of alcohol to use and dependence on the substances in general.
- There are a number of newer entrants in the substance abuse scenario: buprenorphine injection, codeine-containing cough syrups, dextropoxyphene and other opioid oral

preparations, inhalants, cocaine, and the latest being several "club and rave drugs" (Chakraborti and Basu, 2011)

- Adolescent drug abuse is one of the major areas of concern in adolescent and young people's behavior. It is estimated that, in India, by the time most boys reach the ninth grade, about 50 percent of them have tried at least one of the substance of abuse nature (Ramachandran, 1991).
- There are only two published studies on longitudinal trends in substance abuse patterns till date. In a study from north India, Sachdev et al (2002) compared the profile of the patients presenting to the de-addiction centre in 1998, and compared it with those reporting in 1994. There was a decrease in the use of "opium" by almost half and on increase in the use of "poppy husk" by almost double. The most glaring finding was an increase in the abuse of medications such as dextropropoxyphene, diphenoxylate, codeine, *etc*., from 11.08 per cent in 1994 to 28.25 per cent in 1998. However, the time period covered was only four years.
- In the study from south India, Venkatesan and Suresh (2008) compared the patients reporting to the psychiatry OPD of a general hospital for substance use over two decades (1985-1986 till 2005-2006), studied at three time-points set two decades apart (1985-1986, 1995-1996, 2005-2006 respectively). The majority of the patients were dependent on alcohol across the decades but there was a significant increase in the number of patients with polysubstance use from 12.8 and 10.6 per cent in 1985-1986 and 1995-1996, respectively to 20.4 per cent in 2005-2006. They have not reported use of heroin and newer psychotropic substances in the recent years.
- A majority of 250 rickshaw pullers interviewed in New Delhi (Gupta et al. 1986) in 1986 reported using tobacco (79.2%), alcohol (54.4%), cannabis (8.0%) and opioids (0.8%). The substances reportedly helped them to be awake at night while working. In a study of prevalence of psychiatric illness in an industrial population (Dutta et al. 2007. Harmful use/dependence on substances (42.83%) was the most common psychiatric condition.
- In a retrospective study of emergency treatment seeking in Sikkim between 2000 and 2005, substance use emergencies constituted 1.16% of total psychiatric emergencies. Alcohol withdrawal was the commonest cause for reporting to the emergency (57.4%) (Bhalla and Dutta, 2006).

## MANAGEMENT OF DRUG ADDICTION

Management of drug addiction includes treatment as well as prevention. Scientific evidence indicates that the development of drug use disorders and dependence is a result of a complex multi-factorial interaction between repeated exposure to drugs and biological and environmental factors. Effective treatment typically incorporates many components — pharmacotherapy, behavioural therapy and social support — each directed towards a particular aspect of the disorder and matching an individual's particular problems and needs.

### Pharmacological Treatment

Treatment medications, such as methadone, buprenorphine, and naltrexone, are available for individuals addicted to opioids, while nicotine preparations (patches, gum, lozenges, and

nasal spray) and the medications varenicline and bupropion are available for treatment of tobacco addiction. Alcohol dependence can be treated using medications such as disulfiram, acamprosate, and naltrexone.

**Psychological Treatment**

***A. Motivational Enhancement Therapy***

Motivational Enhancement Therapy (MET) is based on the trans-theoretical model of behaviour change (Prochaska & Diclemente 1982, 1984, 1986, 1992) which postulates that change in behaviour takes place in different stages. MET uses motivational interviewing to enhance treatment readiness and move the patient though the stages of change (pre-contemplation, contemplation, determination, and action) for evoking change in substance use behaviors. MET is characterized by an empathic approach in which the therapist helps to motivate the patient by asking about the pros and cons of specific behaviors, exploring the patient's goals and associated ambivalence about reaching those goals, and listening reflectively to the patient's response.

The key elements of MET which are believed to be active ingredient of the intervention are summarized by the acronym FRAMES (Miller & Sanchez 1994, Miller 1995);

i. FEEDBACK of personal risk or impairment
ii. Emphasis on personal RESPONSIBILITY for change
iii. Clear ADVICE to change
iv. A MENU of alternative change options
v. Therapist EMPATHY
vi. Facilitation of client SELF-EFFICACY or optimism

***B. Behavioral Therapies***

In behavioral therapies, based on the principles of learning, the target behavior of habitual excessive substance use is altered through systematic environmental manipulations that vary widely depending on the specific substance use behavior.

*Contingency contracting* is a subtype of contingency management based on the use of predetermined positive or negative consequences to reward abstinence or punish, and thus deter, drug-related behaviors. Negative consequences of substance use may include notification of courts, employers, or family members.

*Cue exposure* treatment involves exposing a patient to cues that induce craving while preventing actual substance use and, therefore, the experience of substance-related reinforcement. Cue exposure can also be paired with relaxation techniques and drug-refusal training to facilitate the extinction of classically conditioned craving.

*Aversion therapy* involves coupling substance use with an unpleasant experience such as mild electric shock, pharmacologically induced vomiting, or exaggerated effects of the substance. This treatment seeks to eliminate substance use behaviors by pairing them with punishment.

***C. Cognitive-Behavioral Therapies***

- *Social skills training*, an element of CBT, recognizes that alcohol and drug dependence commonly results in the interruption of normal developmental acquisition of social skills as well as the deterioration of previously learned social skills because of the

interference of drug-seeking and drug-using behaviors. Social skills training targets an individual's capacity for effective and meaningful communication including non verbal communication, listening, being able to think from others' perspective, adapting to different circumstances, maintaining relationships, and being assertive.

- *Relapse prevention* is a treatment approach in which CBT techniques are used to help patients develop greater self-control to avoid relapse. Specific relapse prevention strategies include discussing the patient's ambivalence about the substance use disorder, identifying emotional and environmental triggers of craving and substance use, developing and reviewing specific coping strategies to deal with internal or external stressors, exploring the decision chain leading to reinitiation of substance use, and developing effective techniques for early intervention .

### *D. Group Therapy*

Group therapy is viewed as an integral and valuable part of the treatment regimen for many patients with a substance use disorder. Many different types of therapies have been used in a group format with this population, including CBT, IPT, and behavioral marital, modified psychodynamic, interactive, rational emotive, Gestalt, and psychodrama therapies.

Given the social stigma attached to substance use disorders, the presence of other group members who acknowledge having a similar problem can provide comfort. In addition, other group members who are further along in their recovery can act as models, and provide hope and encouragement.

### *E. Family Therapies*

Dysfunctional families, characterized by impaired communication and an inability of family members to set appropriate limits or maintain standards of behavior, are associated with poor short- and long-term treatment outcome for patients with substance use disorders (Mc Kay et al, 1992). Goals of family therapy include obtaining information about the patient and his factors which contribute to substance abuse. These include the patient's attitudes toward substance use, treatment adherence, social and vocational adjustment, level of contact with substance-using peers, and degree of abstinence. Family support for abstinence, maintaining marital and family relationships are encouraged. Even the brief involvement of family members in the treatment program can enhance treatment engagement and retention. Controlled studies have shown positive outcomes of involving non-alcohol-abusing family members in the treatment of an alcohol-abusing individual (O Farrell, 1989).

### F. Prevention With Adolescents

Substance use has a well established pattern of onset and progression during adolescence. This has led to the development of a variety of prevention initiatives for children and adolescents. The majority of adults with substance abuse problems begin to use substances during their adolescent years. These interventions are designed with the goal of increasing adolescent's awareness of the various social influences that support substance use and teaching them specific skills for effectively resisting both peer and media pressures to smoke, drink, and use drugs (Botvin, 2001).

- ***Social Resistance Skills***

Resistance skills training programs teach adolescents ways to recognize situations where they are likely to experience peer pressure to smoke, drink, or use drugs. Participants are taught

that they can effectively respond to direct pressure to engage in substance use by knowing what to say (i.e., the specific content of a refusal message) and how to deliver this message in the most effective way possible. These programs also include content to increase students' awareness of the techniques used by advertisers to promote the sale of tobacco products or alcoholic beverages.

- ***Normative Education***

Normative education approaches include content and activities to correct inaccurate perceptions regarding the high prevalence of substance use. Many adolescents overestimate the prevalence of smoking, drinking, and the use of certain drugs, making substance use seem to be normative behavior. Educating youth about actual rates of use, which are almost always lower than the perceived rates of use, can reduce perceptions regarding the social acceptability of drug use. Also evidence is shown for high risks of drug use in the population as many adolescents believe drug use to be acceptable and not particularly dangerous. Normative education materials are often included in social resistance programs.

- ***Competence-Enhancement***

Competence-enhancement programs recognize the importance of social learning processes in the development of drug use in adolescents. Youth with poor personal and social skills are more susceptible to influences that promote drug use. These youth may also be more motivated to use drugs as an alternative to more adaptive coping strategies (Botvin, 2000).

Typically, competence enhancement approaches teach some combination of skills such as general problem-solving and decision-making, cognitive skills for resisting interpersonal or media influences; skills for increasing self-control and self-esteem; adaptive coping strategies, social skills and assertive skills.

## CONCLUSION

The current studies on prevalence of substance use throughout the world show a vast majority of people suffering from drug use disorders. Drug related death is a major concern. One of the first studies on drug use in India was the National Survey on Extent, Pattern and Trends of Drug Abuse in India (2000) which highlighted the need for intervention. Present studies points to the high prevalence of drug use in India, with increasing rates of cannabis abuse, abuse of prescription medications and poly substance abuse. Studies point to gender differences in prevalence and use of drugs. Drug use in women tends to be rapid and also there is a lack of access to care for women with substance abuse. There are a number of viewpoints which explain the initiation and maintenance of substance use. These include the biological perspective which points to the role of neurotransmitters, and genetic factors. The psychological perspective includes the role of reinforcement, psychodynamic and cognitive explanations. Socio cultural perspective highlights the role of environment in drug addiction. Some risk and protective factors have also been identified which either make the individual more vulnerable or more resilient towards substance use. Drug addiction however can be treated with treatment medications and psychological treatment, prevention is a major goal in adolescents with programs such as providing normative education and competence enhancement.

***Declaration:*** The pharmacological treatment described in this article is purely for academic knowledge purpose and should not be prescribed/ used without consultation.

***Acknowledgments***
The author appreciates all those who provided their valuable inputs while writing this research paper.

***Conflict of Interests:*** The author declared no conflict of interests.

## REFERENCES

Basu, D., Aggarwal, M., Das, P. P., Mattoo, S. K., Kulhara, P., & Varma, V. K. (2012). Changing pattern of substance abuse in patients attending a de-addiction centre in north India (1978-2008). *The Indian journal of medical research*, *135*(6), 830.

Becker, J. B., & Hu, M. (2008). Sex differences in drug abuse. *Frontiers in neuroendocrinology*, *29*(1), 36-47.

Bhalla, A., Dutta, S., & Chakrabarti, A. (2006). A profile of substance abusers using the emergency services in a tertiary care hospital in Sikkim. *Indian journal of psychiatry*, *48*(4), 243.

Botvin, G. J. (2000). Preventing drug abuse in schools: Social and competence enhancement approaches targeting individual-level etiologic factors. *Addictive behaviors*, *25*(6), 887-897.

Chakraborty, K., Neogi, R., & Basu, D. (2011). Club drugs: review of the 'rave'with a note of concern for the Indian scenario. *The Indian journal of medical research*, *133*(6), 594.

Chavan, B. S., Arun, P., Bhargava, R., & Singh, G. P. (2007). Prevalence of alcohol and drug dependence in rural and slum population of Chandigarh: A community survey. *Indian journal of Psychiatry*, *49*(1), 44.

Ghulam, R., Rahman, I., Naqvi, S., & Gupta, S. R. (1996). An epidemiological study of drug abuse in urban population of Madhya Pradesh. *Indian journal of psychiatry*, *38*(3), 160.

Guerrero, E. G., Villatoro, J. A., Kong, Y., Fleiz, C., Vega, W. A., Strathdee, S. A., & Medina-Mora, M. E. (2014). Barriers to accessing substance abuse treatment in Mexico: national comparative analysis by migration status. *Substance abuse treatment, prevention, and policy*, *9*(1), 30.

Hazarika, N. C., Biswas, D., Phukan, R. K., Hazarika, D., & Mahanta, J. (2000). Prevalence and pattern of substance abuse at Bandardewa, a border area of Assam and Arunachal Pradesh. *Indian journal of psychiatry*, *42*(3), 262.

Jena, R., Shukla, T. R., & Pal, H. (1996). Drug use in a rural community in Bihar: Some psychosocial correlates. *Indian journal of Psychiatry*, *38*(1), 43.

Jha, P., Jacob, B., Gajalakshmi, V., Gupta, P. C., Dhingra, N., Kumar, R., ... & Boreham, J. (2008). A nationally representative case–control study of smoking and death in India. *New England Journal of Medicine*, *358*(11), 1137-1147.

Mayberry, M. L., Espelage, D. L., & Koenig, B. (2009). Multilevel modeling of direct effects and interactions of peers, parents, school, and community influences on adolescent substance use. *Journal of youth and adolescence*, *38*(8), 1038-1049.

McKay, J. R., Longabaugh, R., Beattie, M. C., Maisto, S. A., & Noel, N. E. (1992). The relationship of pretreatment family functioning to drinking behavior during follow-up by alcoholic patients. *The American journal of drug and alcohol abuse*, *18*(4), 445-460.

Miller, W. R. (1995). *Motivational enhancement therapy manual: A clinical research guide for therapists treating individuals with alcohol abuse and dependence*. DIANE Publishing.

Miller, W. R., & Sanchez, V. C. (1994). Motivating young adults for treatment and lifestyle change.

More, V. K., Ray, S., Kunte, R., Pandya, K., Katoch, S., & Patel, B. B. (2015). A cross-sectional study to determine the pattern, health-related problems and social aspects associated with alcohol use among adults of the rural population in Pune, Maharashtra. *Medical Journal of Dr. DY Patil University*, *8*(2), 165.

Murthy, P., Manjunatha, N., Subodh, B. N., Chand, P. K., & Benegal, V. (2010). Substance use and addiction research in India. *Indian journal of psychiatry*, *52*(Suppl1), S189.

National Institute on Drug Abuse (2014). Drugs, Brains, and Behaviour: The Science of Addiction. NIH Publication: USA.

O'Farrell, T. J. (1989). Marital and family therapy in alcoholism treatment. *Journal of Substance Abuse Treatment*, *6*(1), 23-29.

Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: theory, research & practice*, *19*(3), 276.

Prochaska, J. O., & DiClemente, C. C. (1984). *The transtheoretical approach: Crossing traditional boundaries of therapy*. Dow Jones-Irwin.

Prochaska, J. O., & DiClemente, C. C. (1986). Toward a comprehensive model of change. In *Treating addictive behaviors*(pp. 3-27). Springer US.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American psychologist*, *47*(9), 1102.

Ramachandran, V. (1991). The prevention of alcohol-related problems. *Indian journal of psychiatry*, *33*(1), 3.

Ray, R. (2004). National survey on extent, pattern and trends of drug abuse in India. *Ministry of Social Justice and Empowerment, New Delhi: Government of India and United Nations Office on Drugs and Crime*.

Reddy, K. S., & Gupta, P. C. (2004). Tobacco control in India. *New Delhi: Ministry of Health and Family Welfare, Government of India*, 43-47.

Sachadev, J. S., Yakhmi, R. S., & Sharma, A. K. (2002). Changing pattern of drug abuse among patients attending de-addiction centre at Faridkot. *Indian journal of psychiatry*, *44*(4), 353.

Shukla, B. R. K. (1987). *Drinks and Durgs in a North Indian Village: An Anthropological Study*. Ethnographic and Folk Culture Society.

Soltani MAT, Asgari M, Toghiri A (2013). Effective life skills training to reduce risk factors and increase protective factors for adolescent substance abuse at the Centre for Rehabilitation and Education. Journal of Substance Abuse Addiction Research 7: 149-160

Stewart, D., Gossop, M., Marsden, J., Kidd, T., & Treacy, S. (2003). Similarities in outcomes for men and women after drug misuse treatment: results from the National Treatment Outcome Research Study (NTORS). *Drug and Alcohol Review*, *22*(1), 35-41.

Taheri Z, Amiri M, Hosseini M, Mohsenpour M, Davidson PM (2016). Factors Affecting Tendency for Drug Abuse in People Attending Addiction Treatment Centres: A Quantitative Content Analysis. J Addict Res Ther 7: 270. doi:10.4172/2155-6105.1000270

Tandon, T. (2015). Drug policy in India. *IDPC briefing paper, February*.

United Kingdom, National Treatment Agency for Substance Misuse. (2010). Women in drug treatment: what the latest figures reveal, London.

United Nations Office on Drugs and Crime. (2016). World Drug Report. Retrieved from https://www.unodc.org/doc/wdr2016/WORLD_DRUG_REPORT_2016_web.pdf on 22 June 2017.

US Department of Health and Human Services. (2005). National survey on drug use and health. *Rockville (MD): Substance Abuse and Mental Health Services Administration, Office of Applied Studies*.

Venkatesan, J., & Suresh, S. S. (2008). Substance dependence: Decades apart in a teaching hospital. *Indian journal of psychiatry*, *50*(2), 100.

Villani, S. (2001). Impact of media on children and adolescents: a 10-year review of the research. *Journal of the American Academy of Child & Adolescent Psychiatry*, *40*(4), 392-401.

**How to cite this article:** Singh J, & Gupta P K (2017). Drug Addiction: Current Trends and Management. *International Journal of Indian Psychology*, Vol. 5, (1), DIP: 18.01.057/20170501, DOI: 10.25215/0501.057