



ORIGINAL RESEARCH PAPER

Medical Science

DRUG ADDICTION-CURRENT ISSUES AND TRENDS

KEY WORDS: Drug Addiction, Psychoactive Substances, Alcohol, Cannabis.

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ABSTRACT

Drug addiction become a worldwide problem and the leading cause of death. The global problem of addiction and drug abuse is responsible for millions of deaths every year. 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. 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.

Drug 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 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.

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.

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.

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.

d) Stimulants (Uppers)

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.)

e) Amphetamines

Amphetamine (contracted from alpha-methylphenethylamine) is a central nervous system (CNS) stimulant.

f) Ecstasy

The drug ecstasy, or MDMA (3,4-methylenedioxyamphetamine) is a designer drug, similar in chemical structure to amphetamine.

g) Cocaine

Cocaine is a natural stimulant extracted from the leaves of the coca plant.

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.

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.

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.

k) PCP (Phencyclidine)

Phencyclidine was developed as an anesthetic in the 1950s but was discontinued as such when its hallucinatory side effects were discovered.

ETIOLOGY

YEE

A. Biological perspective

Neurotransmitters

Many psychoactive drugs increase levels of the neurotransmitter dopamine in the brain's pleasure or reward circuits.

Genetic Factors

A gene or combination of genes influences the specific biological mechanisms.

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.

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.

Psychodynamic viewpoint

According to traditional psychodynamic theory, alcoholism reflects an oral-dependent personality.

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.

RISK AND PROTECTIVE FACTORS

Risk Factors	Protective factors
Biologically based susceptibility	Family supervision
Impulsiveness & Aggression	Having conventional friends Having conventional friends
Negative peer influence	Social competence

Perception of low risk of engaging in problem behaviors	Neighborhood cohesiveness
Chaotic home environments	Lack of drug availability
Relatively young age at onset of drug use	Placing an importance on high achievement in school
Failure in school	Cooperativeness
Ineffective parenting (e.g. Permissive/ Negligent parenting)	
Lack of attachment to parents	
Poor social and coping skills	
Poverty	

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.

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).
- 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.
- 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).
- 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.

Psychological Treatment

A. Motivational Enhancement Therapy

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);

- FEEDBACK of personal risk or impairment
- Emphasis on personal RESPONSIBILITY for change
- Clear ADVICE to change
- A MENU of alternative change options
- Therapist EMPATHY
- Facilitation of client SELF-EFFICACY or optimism

B. Behavioral Therapies

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.

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.

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.

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.

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.

Normative Education

Normative education approaches include content and activities to correct inaccurate perceptions regarding the high prevalence of substance use.

Competence-Enhancement

Competence-enhancement programs recognize the importance of social learning processes in the development of drug use in adolescents.

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. 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.

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