

Understanding the Complexities of Adolescent Drug Abuse: Causes, Consequences, and Prevention - A Review Article

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Abstract: *This comprehensive article delves into the pervasive issue of drug abuse among adolescents, discussing its prevalence, stages, causes, and potential consequences. The article emphasizes the importance of recognizing the biological, psychological, and social factors contributing to drug abuse while highlighting the role of peer influence. It also examines various substances, such as tobacco, alcohol, marijuana, and opioids, detailing their effects and associated risks. Furthermore, the article explores prevention strategies, including education, counseling, group support, and medical interventions. By shedding light on this critical issue, the article seeks to equip readers with the knowledge necessary to address and prevent adolescent drug abuse effectively.*

Keywords: Adolescent drug abuse, Causes, Consequences, Prevention, Peer influence

1. Introduction

Use and abuse of drugs and alcohol by teens is very common and can have serious consequences. In the 15-24 years age range, 50% of deaths (from accidents, homicides, and suicides) involved. Possible stages of adolescents experience with drug abuse include abstinence (non-use), experimentation, regular use (both recreational and compensatory for other problems), abuse, and dependency. Repeated and regular recreational use can lead to other problems like anxiety, depression. Some adolescents regularly use drugs or alcohol to compensate for anxiety, depression, or a lack of positive social skills. Teen use of tobacco and alcohol should be minimized because they can be 'gate way drugs' for other drugs (s (marijuana, cocaine, hallucinogens, inhalants, and heroin.

Drug abuse

Drug abuse or substance abuse refers to the use of certain chemicals for the purpose of creating pleasurable effects on the brain

Epidemiology

According to the World Health Organization, 275 million people have used some illicit drug at least once in 2016. The problem has been increasing at alarming rates, especially among adolescents under the age of 30. It is commonly seen in the age group of 16-30 years, unmarried people and then individuals belonging to low or high socioeconomic strata. Alcohol, Tobacco, Cannabis, marijuana and hashish are the most widely abused drugs in the world. Around 141 million people worldwide consume cannabis. The use of stimulants such as amphetamine and ecstasy is also widespread, with nearly 30 million people abusing these drugs. Cocaine is used by around 13 million people across the globe, with the highest number of users in the United States.

Abuse of heroin and other opioids is less common than with other drugs and is taken up by around 8 million people worldwide, mainly in South-East and South-West Asia and Europe.

Globally, alcohol use accounts for 3.3 million deaths every year.³ In India 62.5 million people consume alcohol. It is a major risk factor for cardiovascular diseases, cancers, road traffic accidents, liver and pancreatic diseases and psychiatric problems and dependence.

In India 28.6% of the population use tobacco.⁸ 8 lakh people in India die every year due to tobacco-related diseases.⁶ In Karnataka, 22.8% population use tobacco in some form. Tobacco is used in cigarettes, bidis and smokeless forms like khaini, pan and gutka. Khaini and bidi are the most commonly used forms in our country. On an average, an Indian smokes about 6.2 cigarettes per day while in the lower socioeconomic group, the use of bidi is much higher.⁷ 70-80% of male smokers' smoke at home increasing the risk of passive smoking.

Classification

Based on their shared physiological and psychological effects, many of these substances can be classified into five general categories:

- 1) Central nervous system (CNS) depressants, including alcohol.
- 2) Stimulants including cocaine, caffeine, nicotine and related substances
- 3) Opioids including analgesics.
- 4) Hallucinogens including phencyclidines .
- 5) Cannabis

Drug Abuse Causes:

Biological factors

Genetic vulnerability

Family history of substance use disorder for example, twin studies suggest that genetic mechanisms might account for alcohol consumption. Adolescents may also use drugs to cope with feelings of worthlessness or loneliness, or to avoid uncomfortable feelings

Biochemical factors; role of dopamine and nor epinephrine have been implicated in cocaine ethanol and opioid

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dependence. Abnormalities in alcohol dehydrogenase or in the neurotransmitter mechanism are thought to play a role in alcohol dependence.

Neurobiological theories

Drug addicts may have an inborn deficiency of endomorphins. According to another neurobiological theory enzymes produced by a given gene might influence hormones and neurotransmitters contributing to the development of a personality that is more sensitive to peer pressure

Withdrawal and reinforcing effects of drugs comorbid medical disorder

Psychological factors

- Factors within a family that influence a child's early development have been shown to be related to increased risk of drug abuse.
- Chaotic home environment
- Ineffective parenting
- Lack of nurturing and parental attachment
- Factors related to a child's socialization outside the family may also increase risk of drug abuse.
- Inappropriately aggressive or shy behaviour in the classroom

Social Factors

- Religious reasons
- Urbanisation extended periods of education unemployment
- Poor social support
- Poor social coping skills
- Poor school performance
- Association with a deviant peer group
- Perception of approval of drug use behaviour

Easy availability of drugs

Group Influence

Group influence and peer pressure frequently induce people to experiment with drugs. This is particularly important factor for adolescents who are developmentally in a stage of concern about peer group acceptance. Peer influence is also reflected in the fact that fashions in drug use change as do fads in other areas. At the present, alcohol use is increasing among young people, as use of hallucinogens decreases, cocaine is popular with older drug users as well as with the young, and its prevalence is increasing rapidly.

Common Methods of using drug abuse:

Substances can be taken into the body in several ways:

- Oral ingestion (swallowing)
- Inhalation (breathing in)

Injection into the veins (shooting up)

- Smoking

Common Drug abuses and its problems

Tobacco products:

Tobacco is a leafy plant grown around the world including in parts of the United States. There are many chemicals

found in tobacco or created by burning it (as in cigarettes), but nicotine as tar, carbon monoxide, acetaldehyde and nitrosamines, also can cause harm to the body. The primary addicting substance in cigarettes is nicotine. But cigarette smoke contains thousands of other chemicals that also damage health. Hazards include heart disease, lung cancer and emphysema, peptic ulcer disease, and stroke. Withdrawal symptoms of smoking include anxiety, hunger, sleep disturbances, and depression.

Use of tobacco products is a major public health problem and the leading cause of deaths attributable to psychoactive substance use globally.

Adolescents exposed to second-hand tobacco smoke are at increased risk of a range of health problems such as respiratory infections, allergies and asthma.

Marijuana (also known as grass, pot, weed, and herb):

Marijuana, which comes from the plant *Cannabis sativa*, is the most commonly used illegal drug. Cannabis refers to a group of three plants with psychoactive properties, known as *Cannabis Sativa*, *Cannabis Indica*, and *Cannabis ruderalis*. When the flowers of these plants are harvested and dried, you're left with one of the most common drugs in the world. Some call it weed, some call it pot, and others call it marijuana.

Alcohol:

Although many people have a drink as a "pick me up," alcohol actually depresses the brain. Alcohol lessens your inhibitions, slurs speech, and decreases muscle control and coordination, and may lead to alcoholism. Alcohol consumption is a risk factor for a wide range of health problems and harmful use of alcohol is a major cause of premature illness, disability and death. Social problems also are frequently associated with harmful or hazardous and dependent alcohol use and include breakdown of relationships with family and friends and difficulty maintaining study or work.

OPIOID

Street names for various narcotics/opioids include:(Smack, Horse, Mud, Brown Sugar, Junk, Black Tat, heroin)

Opioids," the term "narcotic" comes from the Greek word for "stupor" and originally referred to a variety of substances that dulled the senses and relieved pain. Though some people still refer to all drugs as "narcotics," today "narcotic" refers to opium, opium derivatives, and their semi-synthetic substitutes. A more current term for these drugs, with less uncertainty regarding its meaning, is "opioid." Examples include the illicit drug heroin Vicodin, codeine, morphine, methadone, and fentanyl. Whereas synthetic opioids are made entirely in a lab and include Meperidine, fentanyl, and methadone. Semi-synthetic opioids are synthesized from naturally occurring opium products, such as morphine and codeine, and include heroin, oxycodone, hydrocodone, and hydromorphone. Teens can obtain narcotics from friends, family members, medicine cabinets, pharmacies, nursing homes, hospitals, hospices, doctors.

Signs and symptoms of abuse:

Although different drugs have different physical effects, the symptoms of addiction are the same no matter the substance. The more drugs begin to affect and control your life, the more likely it is that you've crossed the line from drug use to abuse and drug addiction.

Physical warning signs of abuse:

- Bloodshot eyes or pupils that are larger or smaller than usual.
- Changes in appetite or sleep patterns. Sudden weight loss or weight gain.
- Deterioration of physical appearance and personal grooming habits.
- Unusual smells on breath, body, or clothing.
- Tremors, slurred speech, or impaired coordination.

Behavioural signs of abuse:

- Drop in attendance and performance at work or school.
- Unexplained need for money or financial problems. May borrow or steal to get it.
- Engaging in secretive or suspicious behaviours.
- Sudden change in friends, favourite hangouts, and hobbies.
- Frequently getting into trouble (fights, accidents, illegal activities).

Psychological warning signs of abuse:

- Unexplained change in personality or attitude.
- Sudden mood swings, irritability, or angry outbursts.
- Periods of unusual hyperactivity, agitation, or giddiness.
- Lack of motivation; appears lethargic or "spaced out."
- Appears fearful, anxious, or paranoid, with no reasons

Complications

The centres for disease control & prevention developed the YRBSS to focus attention on specific behaviours that place adolescents at risk for the most significant health problems: Motor vehicle accident, injuries, homicide, suicide, heart disease, and cancer (Public health service, 1993).

By reviewing these leading causes of mortality and morbidity on a national scale, the YRBSS looked at the following. -unintentional & intentional injury, including wearing seat in a car or truck.

- Attempting suicide
- Tobacco use and alcohol & other drug use
- Hangovers, aggressive and violent behaviour, accidents and injury, nausea and vomiting, Reduced sexual performance and premature ageing, Digestive problems, ulcers, inflammation of the pancreas and high blood pressure, Anxiety and depression, relationship difficulties, and financial and work problems , Difficulty remembering things and solving problems , Birth defects and brain damage in babies of pregnant women. Permanent brain damage leading to memory loss, cognitive deficits and disorientation, Stroke, muscle and nerve damage, Liver and pancreas disease. Since the liver detoxifies alcohol, excessive ingestion eventually results in impaired liver functioning, fatty liver, hepatitis, and cirrhosis of liver are frequently complications of alcohol abuse.

Prevention:

Substance abuse may start in childhood or adolescence. Abuse prevention efforts in schools and community settings now focus on school-age Explaining and listening groups. Programs seek to increase communication between parents and their children, to teach resistance skills, and to correct children's misperceptions about cigarettes, alcohol, and drugs and the consequences of their use. Most importantly, officials seek to develop, through education and the media, an environment of social disapproval from children's peers and families.

Primary prevention:

As one progresses along the chain from primary prevention is education that is peer education, and the family measures is parent education.

Secondary education :

To secondary prevention with its risk factors and early problem recognition and treatment.

Tertiary prevention :

To tertiary prevention with it's more complicated and serious forms of illness and risky behaviours, it is obvious that services become increasingly more technological, expensive and exclusive.

Rehabilitation Measures :

Rehabilitation measures also include counselling, therapy, etc. too the affected adolescents.

Support is essential to addiction recovery :

Whether you choose to go to rehabilitation , rely on self-help programs, take a self-directed treatment approach, support is essential. Recovering from drug addiction is much easier when you have people you can lean on for encouragement, comfort, and guidance.

Support can come from:

- Family Members
- Close Friends
- Therapists or Counselor
- Other recovering addicts
- Healthcare providers
- People from your faith community

Group Support Approach:

A group support approach to treatment is helpful to the substance abuse persons. Intervention that can be implemented effectively in a group setting is patient education. Peer group relationships are an important aspects of most drug treatment programs.

Community Reinforcement Approach:

The community reinforcement approach has considerable research supporting it as effective. Community reinforcement has both efficacy and effectiveness data. Community reinforcement and family training (CRAFT) have helped family members to get their loved ones into treatment. Partners are trained to use positive reinforcement, various communication skills and natural consequences. While substance use is associated with physical and mental health problems, it is also worth noting that harmful or

hazardous use patterns of drugs can also cause significant social problems for the user, such as problems with family, friends, the law, work or study and finances.

Medical Care

- A doctor prescribe medications
- To control cravings and withdrawal or help manage medical complications resulting from drug abuse.
- Hospitalization
- Detoxification drugs include
- **opioids:** Methadone, buprenorphine and naltrexone are FDA-approved for the treatment of opioid use disorder.
- **Alcohol:** Three FDA-approved drugs include naltrexone, acamprosate and disulfiram .
- **Tobacco:** A nicotine patch, spray, gum or lozenge can help. Or your provider might prescribe bupropion .
- Psychotherapy
- Create positive attitude
- Detoxification- Supplementation of vitamins, minerals

2. Conclusion

Adolescent drug abuse presents a multifaceted challenge, intertwined with biological, psychological, and social factors. Effective prevention strategies must encompass education, peer support, and timely interventions. By fostering awareness about the diverse range of substances and their potential consequences, this article empowers both adolescents and those around them to make informed decisions and take proactive steps toward a drug-free future. Saying No to peer pressure and free-puff becomes a resounding affirmation of health, well-being, and self-respect.

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