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"A REVIEW ON DRUG ABUSE IN TEENAGER"

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ABSTRACT:
Substance or drug misuse is a severe public health concern that typically affects adolescents and young adults. It affects both men and women, and in many areas, it is the primary driver of young crimes and health-related problems. It harms unborn infants and splits families apart. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) describes the primary feature of substance use disorder as "A Cluster Of Cognitive, Behavioural And Physiological Symptoms Indicating.Despite serious problems related to substance use, the person continues to use the substance.A handful of the many substances that are abused include alcohol, tobacco/nicotine, caffeine, cannabis, inhalants, opioids, sedatives, anti-anxiety and hypnotics, psychostimulants like cocaine, amphetamines, and methamphetamine, and hallucinogens.

Keywords:
Addiction, withdrawal symptoms, dependence, abuse, depressants.

Introduction:

Drugs are defined as any substance or product that is used, or is intended to be utilised, to alter physiological processes or research disease situations. [1]

Drug abuse is the excessive or improper use of prescription drugs, over-the-counter drugs, or both, for purposes other than those for which they were intended. Problems with relationships, health, emotions, and jobs can arise from drug abuse. [2]

It is widely understood that drug use is one of the biggest and most difficult problems facing society. Both environmental and personal factors are equally important in contemporary theories about the causes of drug abuse. Peer pressure and the availability of drugs are examples of environmental factors, whereas personality, "biochemical features," and psychiatric morbidity3 are examples of individual attributes. [3]

Drug Addiction:

Drug addiction is one of the highest social, economic, and bodily costs of human behaviour. Neurons and the circuits they form are essential for the integration of sensory, motor, and behavioural activity as well as for all the intermediary processes of emotion, cognition, and endocrine regulation. Thus, alterations in brain structure, biochemistry, and function have been linked to the development and maintenance of drug addiction. Since these areas of the brain process the motor and behavioural processes affected by addictive substances, the majority of studies on the molecular and cellular basis of addiction have concentrated on how drugs alter these neurons. [4]

Classification of drug abuse:

1. Central nervous system (CNS) depressants
2. CNS stimulants
3. Hallucinogens
4. Dissociative anesthetics
5. Narcotic analgesics
6. Inhalants
7. Cannabis.[5]

fig1: - types of drugs.

1. CNS Depressant:

A central depressive is a drug that inhibits or lessens activation or arousal in various areas of the brain by reducing neurotransmission levels. Numerous volatile substances that are frequently used as solvents are abuse-prone and can have detrimental effects on the neurological system and behaviour immediately after inhalation. [6]

2. CNS stimulant:

The CNS stimulants, which are indirect catecholaminergic agonists, can result in psychoses when used in excess.
Examples: -
1. The amphetamine class, which consists of methamphetamine, dexamphetamine, fenfluramine, and methylphenidate
2. Substances in the non-amphetamine category include modafinil, atomoxetine, sibutramine, and pemoline.
3. Drug use
4. Methylxanthines: Theophylline, Caffeine, and Theobromine [7,8]

3. Hallucinogens:

Hallucinogens are a class of substances that alter perception, thought, and emotion. They cause hallucinations, which are deceptively real perceptions and images.
Hallucinogens' chemical classes include:
The two fundamental groups into which the chemical structures of hallucinogens can be separated are tryptamines and phenethylamines. The simple tryptamines, which include LSD and a few very closely related substances in addition to DMT, 5-methoxy-DMT (5-MeO-DMT), and psilocybin, have relatively rigid conformational analogues and exhibit significant conformational flexibility, should probably be distinguished from the other tryptamine subsets. [9,10]

4. Dissociative Anesthetics:

Dissociative anaesthesia is marked by catatonia, catalepsy, analgesia, and forgetfulness. It typically does not signify a state of complete anaesthesia and is not necessarily accompanied with loss of consciousness. The ability of the cerebral cortex to acquire incoming sensory information and the ability of diverse sections of the central nervous system to communicate with one another are both likely obstructed by dissociative anaesthetics, which is how they most likely induce this syndrome. [11]

5. Narcotic analgesic:

Drugs that serve as narcotic analgesics interact with particular opiate receptors to create pharmacological effects. At doses that have little to no analgesic effect, narcotic analgesics that interact with mu receptors cause locomotor and autonomic activation. [12]

6. **Inhalants:**

While other substances that are abused can also be taken, the term "inhalants" refers to a number of chemicals that people often exclusively take by inhalation. Inhalants that are easily accessible and can be found in the home or office include spray paints, markers, glues, and cleaning products. [13]

7. **Cannabis:**

A compound made from a plant (hemp) that is prohibited yet is enjoyed by certain users as a recreational drug. Three psychoactive plants—Cannabis sativa, Cannabis indica, and Cannabis ruderalis—combine under the term cannabis. The blossoms of these plants are harvested and dried to create one of the most often used drugs in the world. While some call its marijuana, others call it weed or pot. As marijuana becomes legal in more countries, its names are evolving. Today, an increasing number of people refer to marijuana as "cannabis." The name, according to some, is more accurate. Compared to names like "weed" or "pot," which some associate with its criminal nature, they believe this one is more neutral.

Some People Become Addicted and Others Do Not Following Reason:

Addiction has a significant hereditary component. In fact, 40–60% of the predisposition to addiction is estimated to be accounted for by inherited factors. Both the amount of variance attributed to gene-environment interactions and the proportion attributable to genetic variables alone are taken into consideration in these estimations of heredity. It is widely hypothesised that hereditary predisposition to addiction is reflected in variations in drug metabolism and sensitivity to the drug's reinforcing effects. However, phenotypes linked to addiction susceptibility and resistance may also reflect sensitivity to the numerous stressors and substitute reinforcers in a person's environment. As we understand more about the genetic variants that differ between individuals and the gene-environment interactions that increase a person's susceptibility to addiction, we will be able to create interventions specifically for people who are at high risk. [15]

Substances of abuse in children and adolescents in India:

Tobacco :

The majority of Indian studies on teen substance abuse concentrate on tobacco use because it is the substance that is used the most frequently there. Data on other medications, however, are scarce. In terms of both tobacco production and consumption, India comes in third place globally. The age group most prone to start smoking is teenagers. The majority of adult smokers start using tobacco in their early or adolescent years, which is now well acknowledged. A survey by the Indian government's National Sample Survey Organization estimates that about 20 million kids between the ages of 10 and 14 smoke. This astounding number is increased by about 5500 new members every day, for a total of two million new users each year. In contrast, just 4.2% of students aged 13 to 15 who participated in the Global Youth Tobacco Survey smoked cigarettes. Instead, 13.6% of them used tobacco products other than cigarettes. Researchers Narain et al. found that among students aged 11 to 19 in Noida, Uttar Pradesh, 11.2% of them used tobacco, with 8.8% of them being "ever smokers (including current smokers)." 3.7% of respondents identified as "exclusive smokers," 4.6% as "ever tobacco chewers (including current chewers)," and 2.5% as "exclusive tobacco chewers."An average of 12.4 years old was the starting age for tobacco use. Before the age of 11, about 70% of males and 80% of girls under the age of 15 began consuming tobacco. The prevalence of ever using tobacco was 15.7%, while the current usage rate was 5.3%, according to a 2009 college-based survey performed in Banglore by Bhojani et al. Smoking was the most popular way of consuming tobacco among former and current smokers. For 75% of former smokers, the average age at which they first used tobacco was 14.7. (S.D. 2.05 years). Smokers made up the single largest group of substance abusers (60%) according to Malhotra et al. (2008), and 38% of them also used smokeless tobacco. The most important factor cited by nicotine users for starting was peer pressure. [16]

Alcohol :

According to past studies, alcohol is one of the substances that kids and teens use the most frequently. According to a poll, the typical age at which male college students in Punjab, India, consumed their first alcoholic beverage was 18.7. According to an NIMHANS study on the effects of alcohol on public health, the average age at which people begin drinking has reduced. The results of current study indicating trends in alcohol dependence, however, are inconsistent. The number of patients presenting with alcohol dependence has reportedly decreased somewhat. Despite an increase in the total number of patients, these studies show a decrease in the proportion of patients who are alcohol dependent. In contrast to later onset, early frequent alcohol use in late childhood and early adolescent is associated with greater rates of alcohol consumption in adulthood, according to a study done on Andaman school students by Sinha et al. in 2006. [16]

Opioids:

The percentage of patients seeking treatment for opioid dependence has considerably increased over time. The average age of opioid users is also getting older. The types of opioid abuse have changed over time as well. While the use of prescription drugs has increased concurrently, naturally occurring opioid dependence has significantly decreased. Dextropropoxyphene use and dependence on cough medications containing buprenorphine and codeine have both been reported to be on the rise. This has also been seen in studies from throughout the world. [16]

Cannabis:

Cannabis use in India has a long history of being connected to regional traditions and religious convictions, which exposes young children and teenagers to the drug. Despite the fact that many of them believe cannabis poses no harm, teenagers frequently use it excessively. According to population studies, just 4% of cannabis users sought help for their problems,

compared to 3% of kids and teenagers (12–18 years) who abused the drug. According to other studies, cannabis addiction affects a large number of adolescent communities, including students, street kids, working kids, and schoolchildren. Cannabis usage has a deleterious effect on cognitive development in adolescents and is associated with risky behaviour. [16]

Inhalant use:

Teenagers are using inhalants more frequently, especially those from lower socioeconomic backgrounds like street kids [17]. When shown by Benegal et al. in 1998, street-based kids start smoking tobacco when they are 10–11 years old, and as they get a little older, they switch to using inhalants. [18] According to other studies, inhalants are one of the most commonly used substances among specific populations, like juvenile criminals. [19] Because they are believed to introduce users to more potent substances, they are also known as "gateway" drugs. Children have easy access to all gateway chemicals, including inhalants, which can result in serious addiction.

Drug Addiction Begin:

- **Curiosity: -** Public media's frequent references to drugs pique people's interest in using them themselves.
- **Friend's pressure: -** Others are enticed to start using drugs by their friends' frequent praise of their drug use.
- **Frustration and Depression: -** Some people begin using drugs in an effort to cope with their irritation and depression.
- **Desire for More Work: -** Sometimes, students use narcotics to stay up all night studying for exams. It is undesirable since it could lead to a mental breakdown.
- **Looking for a Different World: -** Some young students are tempted to start using drugs due to the false belief that doing drugs opens up a new world.
- **Relief from Pain: -** On a doctor's recommendation, chronic usage of painkillers can occasionally result in addiction.
- **Family History: -** A child's exposure to drug use may be influenced by their family's elders.
- **Excitement and Adventure: -** The youth turn to drugs to satiate their urge for adventure and excitement.[20]

Signs and symptoms of drug addiction:

Signs:

1. Strong desires or cravings to use the drug
2. Ignoring responsibilities in the society and at work
3. Needing to consume the substance frequently in order to feel normal
4. Despite having financial issues, buying drugs
5. Willingness to go above and beyond in order to obtain additional drugs
6. The medication takes a long time to get and utilise.
7. Feeling the effects of withdrawal after stopping drug or alcohol use.[21]

Symptoms:

1. Mix alcohol and prescription medications
2. Lose focus on your responsibilities
3. Have trouble regulating how much you drink
4. Experience diarrhoea and vomiting, and develop chatty
5. Energetic, alert, anxious, and overconfident behaviours
6. If you don't drink, you might get cranky [21]

fig 2: - signs and symptoms of drug abuse

Clinical Summary:

Drug abuse and addiction treatment must be individualised for each patient based on the drugs used and any associated psychosocial problems. The pharmacology of the drug or combination of drugs a patient is taking must be understood in

order to provide a reasonable and effective course of therapy. This can be an urgent concern for the treatment of an overdose or the detoxification of a patient who is experiencing withdrawal symptoms. To address the underlying addiction condition, though, may need months or even years of therapy. The behavioural patterns that were imprinted in memory from thousands of prior drug intakes do not disappear with drug detoxification, not even after a typical 28-day inpatient rehabilitation programme. Long-term outpatient neuropharmacology part ii Universal Free E-Book Store treatment is required. There will likely be times of remission and return. Despite the fact that complete abstinence is ideal, most patients require one or more retreatment periods because they run the risk of returning to drug-seeking behaviour. For opioid dependence or alcoholism, maintenance medications like methadone, buprenorphine, or naltrexone may be useful in some situations. The approach can best be understood in comparison to how other chronic conditions like diabetes, asthma, or hypertension are managed. Long-term care may be required, and a full recovery is doubtful. When compared to chronic diseases, addiction treatments today are considered to be somewhat effective because the majority of patients experience improvements, even though they may not always persist after treatment has completed (McLellan et al., 2000; O'Brien, 1994). Long-term treatment results in improvements in physical health as well as in mental, social, and occupational performance. The majority of therapeutic work is concentrated on addiction's side effects, including pulmonary, cardiac, and hepatic illnesses because there is regrettably widespread scepticism among medical professionals regarding the benefits of treatment. These dangers can be prevented by treating the underlying addiction issue. [22]

Graph of reasons for using substances:

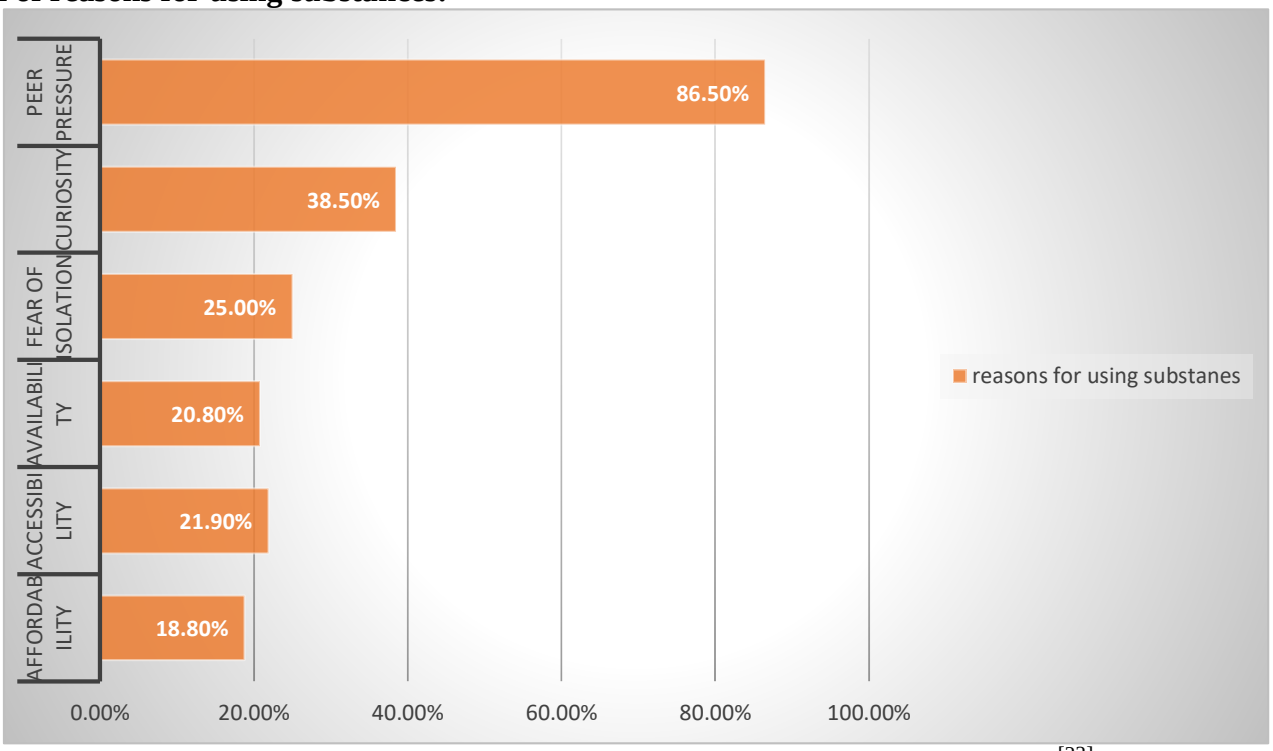

fig3: the graph showed that the reasons of using substance by the teenager.[23]

Increasing Graph of Drug Addiction:

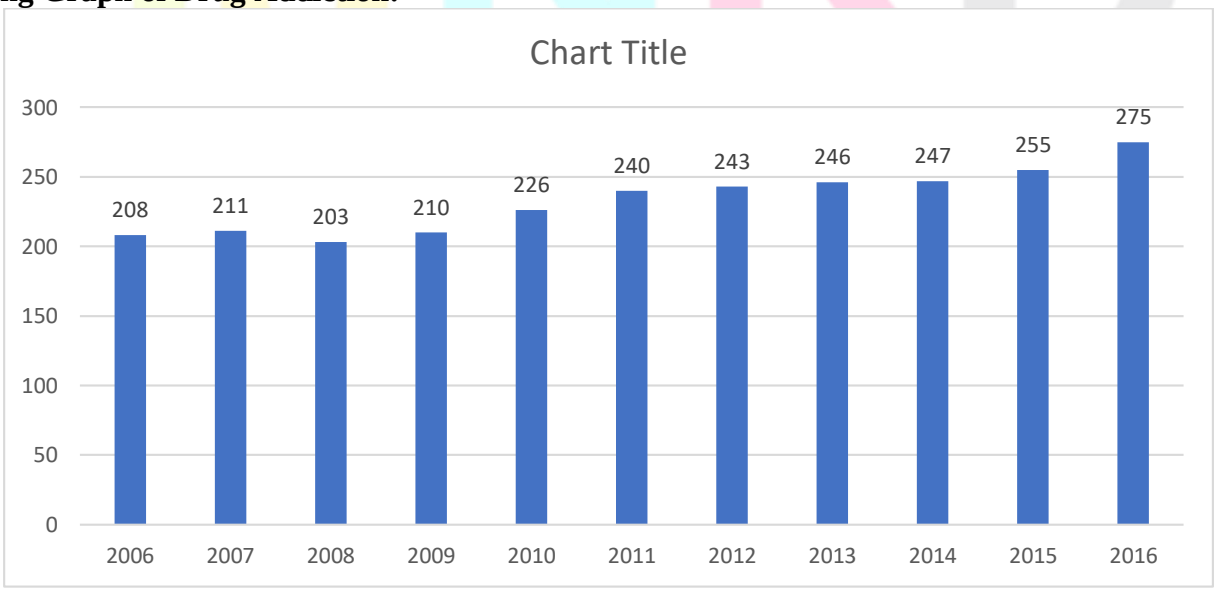

fig4: graph: drug use continues to rise [24]

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