

## The emerging problem of substance abuse

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### Abstract

The Global estimates of premature deaths due to problem drug use as reported by United Nations Office on Drugs and Crime 2017 (UNODC ) are 190000 that is avoidable in most cases. A significant proportion of those deaths are attributable to Opioids. An estimate of 250 million or around 5 percent of world adult population used drugs at least once in 2015 and approximately 30 million of those abusers suffer from drug use disorders. It has been estimated that 28 million years of productive life have been lost due to the problem drug use and 17 million years of healthy living has been spoiled due to drug use disorders. This paper aims to examine the global scenario of drug abuse and the related issues. This paper is an attempt to summarize the problem of substance use in a lucid way with an aim to give an overall scenario of the whole problem of substance use.

**Keywords:** drug addiction, problem drug use, opioids, adolescents

### Introduction

Drug abuse or substance abuse is a major emerging problem of modern nations. Literally, the drug is any substance that manipulates the way our body functions mentally, physically and emotionally. Addiction is not limited to drugs and alcohol but a person can become addict to number things like gambling, shopping, food, and internet but addiction to drugs and substances are very different and its repercussions are serious than other addictions.

There is not a single widely accepted definition of drugs abuse. Different definitions are in use in public health, criminal justice context and in common usage. Drug abuse is a wide and broad term which include but not limited to alcohol, cannabis, barbiturates, benzodiazepines, cocaine, opioids, and some substitute amphetamines. Drug addiction is the cause of many ill behaviors and crimes and it has been said that the individuals under the influence of drugs often engage with criminal justice system and drastic changes in the behaviors and thinking pattern occur under the influence of drugs. Substance misuse is well defined by Royal College of psychiatrists as “any taking of a drug which harms or threatens to harm the physical or mental health or social well-being of an individual or other individuals or society at large, or which is illegal”. Professionals working in the field of drug addiction view this in a very different way from the individualistic perspective. The role of cultural, society in which we live, the unsaid rules and regulations of a given society, the availability of drugs all were taken into consideration while defining the drug addiction problem. Some professional although completely avoid the terms like drug or alcohol abuse rather they use more objective terms like substance and alcohol problems.

Philip Jenkins said that there are two issues concerning drug abuse. First what constitutes a “drug” is debatable because certain substances were considered illegal in many countries while others view it as legal, Nicotine e.g. is not illegal officially in many countries. Second, there is also a sense of ambiguity regarding the term “abuse” which implies a recognized standard of use for any substance. What amount or quantity of a drug accounts as abuse is unclear. There are cultural differences regarding this term

also, e.g. in western societies drinking alcohol occasionally is normal after the meals or after social gatherings. But drinking it enormously and in amounts qualifies it as abuse. In some countries drinking, just a glass of wine is considered as abuse.

The exact cause of drug abuse is unclear but two influential views are predominantly prevalent: one is biological disposition or genetic while other is environmental. The genetic disposition states that drug addicts are genetically designed or they are biologically prone to get addicted.

There is no exclusive medical diagnosis for drug abuse available in American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM), and the World Health Organization's International Statistical Classification of Diseases (ICD). In DSM V drug and substance addiction are placed under substance-related and addictive disorder category. In this category, DSM V has encompassed 10 separate class of drugs: alcohol; caffeine; cannabis; hallucinogens, inhalants; opioids; sedatives, hypnotics, and anxiolytics; stimulants (amphetamine-type substances, cocaine, and other stimulants); tobacco; and other (or unknown) substances (DSM V 2013). All these drugs activate the reward system in the brain which maintains the behaviors and reinforce them. Their level of activation is so intense that they cause severe impairments in the normal functioning. These illicit drugs directly activate the reward system mechanism in the brain instead of achieving it through adaptive behaviors. Individuals with lower levels of self-control, which may reflect impairments of brain inhibitory mechanisms, may be particularly predisposed to develop substance use disorders, suggesting that the roots of substance use disorders for some persons can be seen in behaviors long before the onset of actual substance use itself. Along with substance-related and addiction disorders, DSM V also includes in this category gambling disorder which activates the same brain reward system that the drugs of abuse activate and produce some behavioral symptoms that appear comparable to those produced by the substance use disorders. Some other disorders of addiction are also described in this category like internet gaming but there is limited research in these areas. DSM V also categories between substance use disorders and substance-induced disorders.

### Terms of Drug Addiction

- **Addiction:** It is a state in our brain mechanism by which people get involved in rewarding stimuli despite serious consequences.
- **Dependence:** It is an adaptive state that develops after repeated exposure to drugs and results in withdrawal symptoms if stop taking drugs.
- **Physical dependence:** The physical symptoms that may occur on the cessation of drugs e.g. fatigue and delirium tremens.
- **Psychological Dependence:** Dependence that involves the emotional and motivational withdrawal symptoms e.g. lack of pleasure and loss of interest.
- **Tolerance:** The diminishing effect of a drug resulting from repeated administration at a given dose.

### Drug Misuse

Drug misuse involves the use of prescribed drugs for mood alteration and intoxication ignoring the hazardous impact of overdose. Prescription misuse has been defined differently and rather inconsistently based on status of drug prescription, the uses without a prescription, intentional use to achieve intoxicating effects, route of administration, co-ingestion with alcohol, and the presence or absence of dependence symptoms. The persistent use of certain substances leads to a change in the central nervous system known as tolerance.

In the United States, prescription taking drugs is growing very fast. In 2010 seven million people in the United States were using prescription drugs for nonmedical use according to report provided by National Institute on Drug Abuse. Among 12th graders, after cannabis nonmedical prescription is a most common form of drug use. Nearly 1 in 12 high school seniors reported nonmedical use of Vicodin; 1 in 20 reported such use of OxyContin both of these drugs contain opioids. The availability of prescription drugs is varied. It is often being shared among family members, friends, at school and work and over the counter.

### Polydrug Use

Polydrug Use is a term refers to a condition in which two or more than two substances are taken at the time or one after other. There are essentially different patterns of Polydrug use:

- a) One pattern is different substances being taken together to have a cumulative or complementary effect. This pattern is commonly seen among cannabis and cocaine users, who may use the drug in combination with alcohol; other combinations are the use of heroin in combination with benzodiazepines, alcohol or other opioids (methadone, oxycodone, etc.) and the use of cocaine in combination with other stimulants.
- b) The second pattern of Polydrug is the use of a drug generally to offset the adverse effect of another drug.
- c) A third pattern is observed when a drug is gradually replacing or being substituted by another drug due to changes in price or availability or because the drug is in fashion. Common examples are heroin being substituted by oxycodone, desomorphine or other opioids, as observed in various regions, or "ecstasy" being substituted by mephedrone or some other new psychoactive substance

The extent of Polydrug use is fast growing. According to a study conducted in 2006 in 14 different European countries, about 60 cocaine users are Polydrug users among

which majority of users have used alcohol cannabis and heroin. Approximately half of the drug users in the South-Eastern United States receive treatment for Polydrug use with cocaine, cannabis, and alcohol most prevalent used substances. The consequences of Polydrug use are severe due to the high toxicity, overdose, and death. It is essential to categorize and understand the pattern of Polydrug use and differentiate it from the already established profile of substance user, both for policymakers and treatment procedures.

### World statistics of Drug abuse

According to United Nations Office on Drugs and Crime (2017), an estimate of 250 million people equal to approximately 5 percent of the world population have used an illicit in 2015 and 0.6 percent among these drug users were diagnosed with substance use disorders. It has been estimated that 28 million years of life has been destroyed in 2015 by premature deaths due to drug use and 17 million life years are lost due to substance use disorders. Cannabis is the most prevalent drug used by people throughout the world with 183 million users in 2015 followed by 37 million amphetamine and prescription stimulants and 35 million Opioids users. Ecstasy was used by 22 million people in 2015. Opiates are the drugs derived from the opium poppy plant and the users of opiates in 2015 are 18 million and cocaine users are 17 million people.

Yet, with fewer than one in six persons with drug use disorders provided with a treatment each year, the availability of and access to science-based services for the treatment of drug use disorders and related conditions remain limited.

There are growing incidences of people with injecting drugs (PWID). And it has been estimated that the heaviest burden of drugs is paying by those PWID. Approximately 12 million people inject drugs and among them, 1.6 million people are living HIV, 6.1 million are living with Hepatitis C and 1.3 million people are living with both Hepatitis C and HIV. Hepatitis C causes most deaths related to drug abuse than HIV and more healthy life years are lost due to Hepatitis C. 222,000 deaths are attributed to Hepatitis C as compared to 60,000 deaths due to HIV.

Tuberculosis is also prevalent in people who use drugs than the normal population. Based on the limited data available from studies in Europe, Asia and the Americas, the prevalence of tuberculosis among PWID is estimated at approximately 8 percent. Meanwhile, the prevalence of tuberculosis in the general population at the global level is estimated at less than 0.2 percent (UNODC).

There are also gender differences in drug use. At least twice as many men than women suffer from drug use disorders. However, once women have initiated substance use, in particular, use of alcohol, cannabis, opioids, and cocaine, they tend to increase their rate of consumption more rapidly than men. As a result, women may progress more rapidly than men to drug use disorders. Women's access to treatment for drug use disorders is also more limited than men's. In the past decade, the negative health impact of drug use has increased more rapidly among women than among men. The rate of increase in the number of DALYs (Disability Adjusted Life Years) attributed to drug use disorders in 2015, particularly opioids and cocaine use disorders, was greater among women (25 percent and 40 percent, respectively) than among men (17 percent and 26 percent, respectively).

## World Drug Market

Opiates and Opium remain most serious and ill effected problem drugs. Most of the drug-related deaths are due to opioids. In 2013 it was reported that opium cultivation has grown considerably in Afghanistan which has the largest opium poppy cultivation (154,000 hectares in 2012 to 209,000 hectares in 2013). Along with Afghanistan Myanmar also witnessed expansion in Opium cultivation in 2013. Globally opium cultivation in 2013 stood at 296,720 hectares largest since 1999. The opioid market is becoming more diversified: this is illustrated by the example of the United States, where the opioid market comprises a combination of internationally controlled substances, particularly heroin, and prescription medicines that are either diverted from the legal market or produced as counterfeit medicines on a large scale. These counterfeit medicines are made to look like pharmaceutical products while actually containing fentanyl and fentanyl analogs, as well as nonopioid substances such as derivatives of benzodiazepine and methylphenidate.

There is a considerable growth of new substance in world drug market. Between 2009 and 2016, 106 countries reported the emergencies 106 countries and territories reported the emergence of 739 different NPS (New Psychotic Substances) to the United Nations Office on Drugs and Crime (UNODC). In 260 NPS were reported in 2012 which reached to 483 NPS reported in 2015. These substances are marketed in many divergent ways and forms, new substances often come to the scene quickly and disappear again, while some become used regularly among a small group of users. Several countries have reported NPS being sold under the name of controlled drugs such as "LSD" and "ecstasy". Often used for reasons similar to those for the use of traditional drugs, their easy availability and low prices have made certain NPS highly attractive to some groups of drug users.

During the period 2009-2015 a core group of over 80 NPS was reported every year and appear to have become established on the global market; a number of them have been placed under international control. On the other hand, about 60 NPS seem to have disappeared from the market since 2013. Problems in identifying them in a laboratory may be a factor, however, in the low level of reporting of these lesser-known substances.

"Ecstasy" market has increased and the variety of "ecstasy" products available to drug users has increased. The three main types are: (a) "ecstasy" tablets containing little or no MDMA (3,4-methylenedioxymethamphetamine); (b) "ecstasy" tablets with an extremely high content of MDMA; and (c) "ecstasy" sold in powder or crystal form, under different street names. "Ecstasy" tablets with a high MDMA content are of particular concern in Europe, where law enforcement entities have also discovered industrial-scale MDMA manufacturing facilities.

In 2016, there is considerable growth in opium production. The opium production has increased by one third compared with the previous year. Although there was also an increase in the size of the area under opium poppy cultivation, the major increase in opium production was primarily the result of an improvement in opium poppy yields in Afghanistan compared with the previous year. At 6,380 tons, however, total global opium production was still some 20 percent lower than at its peak in 2014 and was close to the average reported in the past five years.

Data on drug production, trafficking and use point to an overall expansion of the market for cocaine worldwide.

After the decline in the cocaine production, coca bush cultivation increased by 30 percent during the period 2013-2015, mainly as a result of increased cultivation in Colombia. Total global manufacturer of pure cocaine hydrochloride reached 1,125 tons in 2015, representing an overall increase of 25 percent over 2013. Cocaine use In North America and Europe there appears to be a considerable increase in Cocaine. The prevalence of use of cocaine among the general population and testing in the workforce suggest an increase in cocaine use in the United States. In Europe, early signs of increases in cocaine consumption, based on wastewater analysis in selected cities, have been reported, with an increase of 30 percent or more during the period 2011-2016. The quantities of cocaine seized are also on the increase. Worldwide, they increased by 30 percent to reach 864 tons (of varying purities) in 2015, the highest level ever reported. In North America, they increased by 40 percent to reach 141 tons; in Europe, they increased by 35 percent to reach 84 tons.

## Conclusion

The problem of drug abuse and addiction is fasting growing in every corner of the world. The trafficking and smuggling of illicit substance are also on rising and can be seen from the statistics mentioned in this paper. The more worrisome is the destruction that these illicit drugs and substances are causing to humankind economically, health-wise and more serious the substance-related deaths. More than 180,000 premature deaths are attributed to opioids substance alone. International law that has been in place is doing their bit but still much more is needed to curb this menace both at judicial, state and individual level. The contribution of common masses is also immense because it is where the problem starts to grow. The treatment is not still adequately available as the only one person out of six problem abusers have access to treatment. Furthermore, new methods of intervention at community health level were needed. Psychological interventions are also needed to develop new intervention strategies in order to cope with the trending demands of substance use.

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