

LOCKED UP BEHIND CRYSTAL BARS: THE RISING EVIL OF DRUG ABUSE

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"Drug abuse in Pakistan reaches alarming level. In the past few years about 6.7 million youngsters have used drugs in Pakistan" (The Nation, February, 2018)¹.

"700 people in Pakistan die every day due to drug-related problems, as compared to terrorism-related activities that result in the loss of average 39 lives per day" (Pakistan Today, February, 2018)².

"Youngsters in Pakistan are the most affected by drugs and alcohol and the number of these addicts is increasing at the rate of 40,000 per year. One out of every 10 college/university students is a drug addict" (The NEWS International, June, 2018)³.

Above are a few excerpts from articles published in some of the leading newspapers of Pakistan in the past year. And we have been seeing such news and discussions on daily basis both in print and electronic media highlighting the monstrous problem of drug addiction. Media has, no doubt, a habit of sensationalizing and blowing the issues out of proportion and depicting them as something humongous. Like all other issues we wish it were true with the issue of drug addiction too. But alas that is not the case. The matter of drug addiction cannot be overemphasized!

Drug abuse is as old as the mankind itself. Be it for medicinal purposes in the form of milk of poppy, or use in religious ceremonies like mushrooms and hemp (hashish, marijuana) for the psychedelic, out of world experience, or simply in general population for social purposes like alcohol, caffeine and nicotine. Frozen body of a man recovered in the Alps in 1991, carbon dated about 3300 years BC, carried in his pouch a polypore fungus with antibacterial and hemostatic properties⁴. Similarly, the health hazards in relation to drug abuse have also been described since early times. These include the death of Alexander the Great due to excessive drinking, Aristotle's hypothesis of harmful effect of drinking during pregnancy⁵, and evolution of biological explanation for drug abuse in 17th century establishing its status as a disorder rather than just a behavioral problem or a sinful act. Breakthrough works by eminent scientists throughout the 20th century paved the way for modern addiction medicine that we are familiar with today.

According to the United Nation Office for Drug and Crime's annual report in 2015, about a quarter of a billion people used drugs in the year before the report. Of these, around 29.5 million people (0.6 per cent of the global adult population) were engaged in problematic use and suffered from drug use disorders. Among those opioids were the most harmful drug type and accounted for 70 percent of the negative health impact associated with drug use disorders worldwide⁶.

According to UNODC annual report 2016, Cannabis is the most widely used illegal drug in the world, with an estimate of 3.8% in 2014 (182 million)⁷. A survey in Pakistan in 2013 estimated 6.7 million drug abusers in Pakistan among which Cannabis abuse was the highest, about 4 million⁸.

There is a huge dichotomy in reaction to the drug culture. On one side scientists and physicians are working on research projects to find out the harmful effects of the cannabis. That includes increased risk of developing chronic mental illnesses like schizophrenia and bipolar affective disorder. A multi-center case-control study was conducted in Europe between May 2010 and April 2015, data were obtained from 901 patients with first-episode psychosis across 11 sites and 1237 control subjects from those same sites. This and several other recent studies have concluded that the daily cannabis use was associated with five times increased odds of psychotic disorder as compared with never users⁹⁻¹¹.

While on the other side, the developed countries are legalizing cannabis for 'medicinal' purposes, like for nausea associated with chemotherapy, anorexia in AIDS patients, and some intractable forms of epilepsy¹². As of April 2019, medical marijuana has been legalized in 33 states of US as well as in countries like Australia, Canada, Chile, Columbia, Germany, Greece, Israel, Italy, Netherlands, Peru, Poland, Portugal, UK, and Uruguay¹³. The medicinal cannabis like Sativax, Epidiolex, and other brands of donabinol are being widely used, latter two have been approved by FDA¹².

There's an emerging new trend of edible marijuana in the form of cookies, candies and gummies that are easily available in market and online after legalization of recreational cannabis in selective places¹⁴. Following this there's been a considerable increase in cannabis use, as well as in public safety indicators like cannabis-related emergency room visits, hospitalizations, traffic accidents and related deaths⁷. The question is, are we ready to pay the heavy price for a little recreation? Is it really worth it? And will the legalization not facilitate the abuse of cannabis?

Drug abuse culture has deeply penetrated all strata of our society. Especially the lower and upper classes, ranging from gutka, pan, chhaliya, to methamphetamine (crystal-meth), cocaine, and other party drugs like LSD, MDMA, and synthetic cannabinoids etc. There is a rise in drug abuse culture in our educational institutes. Be it universities, colleges or even schools. Abuse of methamphetamine, commonly known by the street names of ice/ crystal meth/ speed/ chalk, is dangerously rising leading to multiple serious physical and psychiatric complications. Amphetamine and methamphetamine constitute considerable share of burden of disease, ranking second

only after opioids¹⁵. Users of amphetamines have been increased, reaching 37 million globally¹⁵, and approximately 19,000 people nationwide⁶. In Pakistan average quality meth costs Rs 5000-10,000/gram, and low quality costs Rs 1000-2000/gram rendering its abuse more prevalent among youngsters belonging to higher social class. Its use as a party drug along with LSD, MDMA, ketamine, rohypnol has become an almost integral part of social gatherings with the claims that their effects are temporary and completely wear off without causing any harm. All this has led to a misconception that these are 'soft drugs' and hence not harmful.

Due to this surge, it is mockingly labelled as the 'ice-age' of Pakistan. During a survey in a renowned college in the Capital of the country, when asked if he felt there had been an increase in drug use amongst his peers, a 21 years old student said: "Yes, it has increased. It's really easy to get now; there's a dealer on every corner, three or four in every sector"¹⁶. Drug addiction mostly starts because of curiosity, need for experiment, peer pressure, as iatrogenic, or secondary to some mental illness, most commonly depression and anxiety¹⁷⁻²⁰. The greatest lie a drug addict tells himself is that he can stop any time. This lie keeps him going until he gets trapped in the quicksand of drug addiction and is unable to free himself. In an interview in a newspaper, a student of an elite college stated in response of the proposed Compulsory Drug Test of Students Act 2018, "I think it is unfair that everyone is tested and that all drugs are treated the same. Many of my friends and I do weed. [...] it's harmless. To me, it's ridiculous that cigarettes are legal and weed is not"¹⁶.

Discussing the neurophysiology of drug abuse there are complex pathways and receptor systems involved. The endocannabinoid system plays an important role in brain maturation. Its over-activation by cannabinoid receptor type 1 agonists (e.g., tetrahydrocannabinol) during adolescence results in changes in neuroplasticity, can alter brain maturation and cause long-lasting changes that persist in the adult brain²¹. Earlier the age of starting abuse, higher is the risk²². There is a synthetic mixture of cannabis with street names of K2/ spice/ joker/ genie/ black mamba, branded as 'herbal', claiming they don't have any harmful effects as they're made from natural sources. This is totally false and misleading²³.

Similarly, methamphetamine overdose that can easily occur, can lead to stroke, heart attack, or multiple organ failure. These conditions can result in death²⁴. In addition to multiple physical and neurological complications, psychotic symptoms and syndromes are frequently experienced among individuals who use methamphetamine (MA), with recent estimates of up to 40% of users affected. Although the recovery period on average is reportedly within a week, in a sizable subset of individuals, MA-induced psychosis converts over a period of years into a primary psychotic disorder, with symptoms present over months or longer, even in the absence of MA use²⁵.

In addition to cannabinoids and methamphetamine, 739 different new psychoactive substances (NPS) have been reported between 2009-2016. There's been a recent emergence of NPS mimicking medicines like fentanyl analogues and benzodiazepine derivatives, with high potential to cause harm²⁵. While the market for NPS is still relatively small, users are unaware of the content and dosage of these, that is really alarming. Owing to this there is a rise in the cases of drug induced psychosis in psychiatric wards^{10,11}.

We are well aware how HIV/AIDS pandemic has spread its horrors worldwide claiming lives of millions. According to world health Organization (WHO) statistics only in 2017, 940,000 people died from HIV related causes globally. 36.9 million people were found infected till the end of 2017 globally, out of which 1.8 million were newly infected in that year. 47% of these cases belonged to the key population that comprised of homosexuals, drug abusers, sex workers, prisoners and transgender people²⁶. HIV/AIDS is related to drug abuse in more than one way. We found 38.8 % HIV positive results in IV drug abusers in a local study conducted in our indoor drug abuse and treatment center in 2014^{27,28}. In addition to this, unsafe sexual practice is another significant source of HIV transmission. Methamphetamine abuse causes heightened and unprotected high risk sexual behavior thus increasing the risk of acquisition of HIV. Moreover, studies show its role in HIV-1 pathogenesis, as it causes immune dysfunction, potentiates HIV-1 replication, and enhances viral load in the brain. It also increases anti-retroviral resistance²⁹. Combined HIV infection and Meth use increases the likelihood of neural injury in CNS leading to cognitive impairment and impaired behavioral inhibition³⁰. Hence crystal meth use and HIV combined becomes a double edged sword ready to slice through the health and moral status both at individual as well as community level.

It is a well-known fact that drug abuse and criminality go hand in hand. It's a three-way relationship viz. offenses related to drug possession and distribution, offenses directly related to drug abuse like stealing, and offenses as after effects of drug abuse especially during intoxication that includes violent behavior, sexual offenses and vandalism. A 2009 survey done in US state prisons reported drug dependence in about half of the prisoners. Similarly, juvenile prisons also have high number of prisoners who are drug abusers³¹. It increases the burden on the Justice system. The situation is even worse in the third world countries, where it eventually further compounds the economics of already poverty stricken countries. The drug control comes under domain of multiple agencies. There are contradicting roles and policies by several departments and there seems contradiction among them on many levels. In the recent national political scenario, since health has become a provincial subject, drug abuse comes as one of the lower most priority. It does not enjoy as much importance as it deserves, owing to the health sector political scenario. It should be considered as an epidemic and managed like one.

We've got to accept the fact that the genie is out of bottle. Apart from drug control, the need of time, especially for health care professionals, is to know how to specifically and effectively manage these cases. There are well defined guidelines for the management of opioids addiction. There is a awful need to establish specific treatment strategies for these substances too. According to the latest Maudsley prescribing guidelines in Psychiatry, drugs like dexamfetamine, bupropion, methylphenidate and modafinil have failed to show any effectiveness as replacement therapies for methamphetamine dependence. Although a few RCTs show good results with naltrexone but data is scarce³². So basically we're standing nowhere regarding the clear-cut guidelines for its management. The number of cases is rising and it warns of the potential for a "second wave" of increased methamphetamine use and associated problems (first peak was in early 1990s), thus

indicating the immediate need for advancements in basic and clinical methamphetamine research³².

Speaking of management of drug addiction apparently everyone is an 'expert' in that regard. So many good-for-nothing shadow experts. There is a dilemma as who should be dealing with drug addiction. Is it a domain of psychiatrists? Clinical psychologists? General physicians? Social workers? NGOs? There are so many private addiction centers being run by unauthorized personnel, and compartmentalization is seen. What this shows is that drug addiction is nobody's child and everybody's child! Another dilemma is whether the drug addiction management should be according to open or close strategy. It is usually seen that rehab centers are far away from the populated areas, the idea being to keep it 'confidential'. Are we helping the cause or causing more harm in the long run? Drug abuse is already a highly stigmatized area especially in our society. By doing so are we increasing the stigma? Rendering it something that should be hidden and not openly mentioned or discussed? This needs speculation.

Following are some more suggestions to curb this menace and improve the management of substance use disorders. First of all, the specialty of addictionology needs utmost consideration. There should be specified professionals and guidelines as who should be dealing with this problem and how. The mental health care professionals, general physicians and even medical students should be well versed in the subject, including its incidence, prevalence, effects on physical and mental health and management. There should be refresher courses including the latest updates and revision of previous literature, for which certificates are rewarded. Medical universities should come to the front and take the lead regarding the certificate and diploma courses. In addition to this, other educational institutes as well as our religious scholars must show responsibility in tackling this as a social problem. The assigned representatives should be trained by the concerned departments to spread the awareness, so that the stigma, seclusion, and fear reaction regarding the drug abuse can be handled on appropriate and realistic grounds. We need these measures on urgent basis, so that this stinky worm of drug addiction can be squished that has been eating at the core of our very society.

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