


Adolescents, Drugs, and COVID-19: Special Challenges During the Pandemic

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The COVID-19 pandemic has affected lives globally in a profound manner. At the time of this writing, there are 83.6 million confirmed COVID-19 cases worldwide and 10.3 million in India. India reported its first COVID-19 case on January 30, 2020, and soon recorded exponential growth in the number of positive cases. In response to this global public health crisis, the Government of India, like many other countries, initiated a nation-wide lockdown on March 24, 2020, shutting down all nonessential services, restricting human movement, and advising self-isolation and social distancing practices to the citizens. The healthcare sector continues to function under the rubric of essential services, however, with some practical restrictions. As the world battles the COVID-19 pandemic, isolation, restriction of movement, and economic shutdown have brought drastic changes to our psychosocial environment. These changes impose significant challenges for child and adolescent mental health. Decreased opportunities for stress regulation, anxiety, existing mental health conditions, domestic violence, child maltreatment, and traumatic experiences have been discussed, and ensuring

continuity of care with helpline services have been recommended.¹

However, one population that has received little attention is adolescents who use substances. Substance use among adolescents is a cause of concern worldwide.^{3,4} According to the national survey, Magnitude of Substance Use in India, 2019, the prevalence of current

use among adolescents is 1.8% for opioids, 1.3% for alcohol, 1.17% for volatile solvents, and 0.9% for cannabis.² Substance use in this population comes with its unique complications like poorer prognosis, adverse impacts on physical, psychological, and socio-occupational functioning, and other risky behaviors, warranting a need for special attention



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in terms of prevention, recognition, and management.^{3,4}

Research on substance use disorders in the context of the COVID-19 pandemic is limited to anticipating changes in substance use patterns and treatment challenges. While most of the existing literature is focused on adults, the needs of special populations like adolescents find little attention. The only study focussing on substance use among adolescents during the COVID-19 pandemic was conducted among 1054 Canadian adolescents, reporting an increase in the frequency of alcohol and cannabis use, with a significant number of adolescents ignoring social distancing and other relevant precautions while using substances with peers.⁵ We aim to bring out the specific challenges that adolescents who use substances may face during the current global situation

Impact of Substance Use on the Risk of COVID-19 Infection Among Adolescents

While children and adolescents seem to have milder symptoms of the disease and are at a lower risk of mortality from COVID-19 compared to middle-aged and older adults,^{6,7} the same cannot be said for adolescents who use substances. Although there is no research to date that assesses this risk in this population, studies comparing respiratory symptoms and lung functions among adolescents who use substances (cannabis, volatile solvents, and other substances by inhalational route) with age-matched healthy controls have reported significantly higher respiratory symptoms (cough, expectoration, dyspnoea, emphysema, and bronchitis) and decrease in spirometric parameters.⁸⁻¹⁰ This may put them at a higher risk of getting coronavirus infection or increased risk of severe disease in comparison to adolescents who do not use substances. Adolescents with immunocompromised status, a significant proportion of whom are formed by adolescents who inject drugs,¹¹ are also at a higher risk of infection and mortality.⁶

Adolescence is the age of experimentation and a sense of invincibility marked by high novelty seeking and low risk perception. Adolescents who use substances

also have an increased prevalence of comorbid externalizing disorders characterized by oppositional behavior and a disregard for rules.¹² These attributes present an added vulnerability to adolescents who use substances. Adolescents generally use substances in groups^{13,14} and may not maintain social distancing or take necessary precautions while using substances or in an intoxicated state. Also, sharing of equipment for drug use via inhaling, vaping, smoking, or injecting routes, which could be contaminated, may increase the risk of spread of infection.^{5,15} Adolescents may put themselves at the risk of getting infected while trying to procure substances per se or in the process of arranging money for substance use, which may involve risky behavior like sexual activity with strangers.¹⁴ The usual symptoms of COVID-19 infection, namely cough, expectoration, diarrhea, loss of appetite, and generalized weakness, may mimic withdrawal symptoms, making the two difficult to differentiate and manage accordingly.¹⁶

Substance use is often associated with socio-economic adversities like homelessness, overcrowded living conditions, and poverty, which impact adolescents just like adults. There may be a lack of awareness and sensitization about personal protective measures among adolescents. Sources of information about COVID-19 and helpline numbers are available mostly through online resources or social media platforms, which may be difficult to access for such adolescents, also resulting in lack of access to telemedicine services, nutritious food, and protective equipment like face masks and alcohol-based hand sanitizers. This situation, compounded with limited facility for self-isolation and social distancing, also makes the adolescents who use substances a population at significant risk of coronavirus infection.⁷

Impact of COVID-19 Pandemic on Substance Use Practices in Adolescents

The COVID-19 pandemic has presented the world with many challenges, some of which can be anticipated to profoundly impact substance use practices, particularly in adolescents.

The pandemic has given the world a major economic setback, adding tremendous financial pressure on many families in the form of loss of employment, decline in income, and debts that may be newly incurred or present already. Studies have shown that such stressful conditions in the family may adversely influence parent-child relations and increase the risk of mental health conditions and substance use in adolescents.^{1,6} Also, the closure of schools and colleges and decreased contact with peers have gravely disrupted their daily routine, adding developmental and emotional stress to educational setbacks.^{1,17} The families of adolescents who use substances tend to have greater dysfunction, higher incidences of domestic violence, child abuse, and interparental conflict, and poorer parent-child relationship.¹⁸⁻²⁰ Having to spend more time in such an environment is another reason adolescents feel stressed, display aggressive behavior, or develop psychological disturbances, and seek substances to find relief.¹⁹⁻²¹ This situation is further complicated by limited ways of stress regulation, like outdoor activities, sports, and other healthy peer interactions. These factors may increase substance use rates in adolescents, along with mental health issues.^{1,14,17} Moreover, COVID-19 infection may be associated with compromised lung function and respiratory depression. In a coronavirus-infected adolescent, respiratory compromise may be aggravated by the use of psychoactive substances like opioids, which in high doses, can cause respiratory depression, leading to an increased risk of death due to hypoxia.¹⁵

However, this situation has several more nuances, making the impact of the COVID-19 pandemic on substance use among adolescents complex to understand. While substance-seeking behavior in adolescents can be expected to increase, due to restriction on human movement imposed by the lockdown, the availability of licit and illicit substances has significantly reduced. This has resulted in a steep rise in the demand and prices of these substances.²² This situation can have either of the four effects—adolescents, in an attempt to obtain substances, or in an attempt to cut costs, may do so by unauthorized

means, exposing themselves to spurious or low-quality substances, causing adverse effects on health, as witnessed in the unfortunate deaths due to methanol consumption in Iran, increased consumption of locally brewed alcohol and poisoning in Bihar, and cases of drinking alcohol-containing hand sanitizer during initial phases of the strict alcohol ban in India.^{23,24}

Adolescents may switch from licit to illicit substances whose supply is operated through clandestine channels and may endanger themselves with physical and psychological harm, also running the risk of getting into conflict with the law.^{13,16,25} The third alternative is that adolescents may have to endure a forced abstinence, which may involve having to deal with intense cravings and withdrawal symptoms, some of which may pose complications, like delirium, seizures, and other life-threatening conditions, with some substances requiring emergency medical attention.^{26,27} In another possibility, difficulties in access to substances, reduced engagement with peers who use substances, and spending time with family may motivate adolescents to consider abstinence and seek treatment.

Impact of COVID-19 Pandemic on the Management of Adolescents Who Use Substances

People who use drugs are usually a marginalized and stigmatized population who have poor access to healthcare services. Moreover, with a treatment gap of more than 90%, help-seeking in adolescents is known to be poorer as compared to adults who use substances.²⁸ The current situation also brings in several challenges in the management of adolescents who wish to seek treatment for substance use, due to the closure of treatment centers and child helpline services because of lockdown.¹⁶ This may create difficulties for the two distinct treatment-seeking populations—those adolescents who already are in treatment and those who are contemplating seeking treatment for substance use.

Adolescents who already were in treatment before the lockdown was initiated

may find it difficult to reach the treatment center or to spend enough time or feel as comfortable as earlier with their therapist or doctor. The current guidelines advise as little close contact with the patients as feasible and increasing the duration between two follow-up visits.²⁸ While this may provide a sense of reduced risk to the treatment provider, it may not work for adolescent patients who require intensive psychosocial support and the involvement of the family and the therapist in addition to medical management.^{13,14} This may lead to a sense of dissatisfaction with treatment or therapy and contribute to relapse.

Adolescents who were using substances prior to the COVID-19 pandemic and found the motivation to seek treatment may find it difficult to access or difficult to engage in the treatment process, due to similar reasons. Limitations on the functioning of outreach services and non-governmental organizations dedicated to child welfare and child care institutions have resulted in added difficulties for adolescents who use substances.

No guidelines on treating substance use disorders during the COVID-19 pandemic consider special populations, including adolescents. These guidelines recommend flexible take-home dosing of buprenorphine and methadone,^{16,25} which is risky if prescribed to adolescents (without attendants) in that manner. They may use these in excessive doses or may mix multiple psychoactive substances as per availability, putting them at a greater risk of adverse health events and mortality.

Protective Effects of COVID-19 Pandemic on Adolescents Who Use Substances

The silver lining in this dark cloud comes in the form of disruption in the supply chain of both licit and illicit drugs. The consequent increase in price and difficulty in access may discourage adolescents from initiating substance use or dissuade those who use substances in a nonproblematic manner from increasing the amount or frequency of use. This time may also provide adolescents with an opportunity to break free of negative

peer influence, explore their personal growth and planning for their future, and bond with their family members. This turn of events may encourage attempts to reduce or stop substance use and promote treatment-seeking in adolescents.

Recommendations for Treatment Services

Due to the changing scenario, there is a dire need for addiction treatment services to understand the challenges adolescents who use substances face and modify their treatment approach. Health authorities may benefit from the development and application of specific strategies for adolescents who use substances, aimed at early identification, sensitization, and provision of protective materials like face masks and alcohol-based sanitizers, in order to interrupt transmission, providing appropriate care, attending to medical and psychological issues, and minimizing negative social impact due to COVID-19.²⁹ Meanwhile, provision of treatment for substance use needs to be prioritized, considering the special needs of adolescents who use substances, in terms of medical management, psychosocial support, and attempts to reduce the challenges they face as a vulnerable but hard-to-reach population. In this period, internet-based or telephone-based psychological intervention is recommended.

Enlisting family members' help in supporting adolescents through this difficult period can be achieved by sensitizing caregivers of the challenges faced by adolescents during this time. Flexible timings for consultation via internet-based or telephonic means may provide adolescents and their families with relief in case of a crisis. Both caregiver and treatment provider should make efforts to appreciate quit attempts, in order to assist the adolescent in maintaining motivation to abstain from substances and remain in treatment. Clinicians who come in contact with adolescents in their daily practice, like primary healthcare physicians, general physicians, and paediatricians, are also urged to keep a keen eye out for the development of psychological disturbances in the adolescents, which may contribute to relapse to substance use or may cause

TABLE 1.

Recommendations for Treatment Services and Health Policies

1.	Information, education, and communication activities specific for adolescents who use substances during the COVID-19 pandemic.
2.	Protective equipment like face masks and face shields to be provided.
3.	Telepsychiatry guidelines with special provisions for adolescents who use substances.
4.	Telephonic/internet-based psychosocial interventions.
5.	Psychoeducation and sensitization of caregivers to specific needs and vulnerabilities of such adolescents.
6.	Training of healthcare providers for early identification of substance use, initiation of care, and referral wherever required.

dysfunction severe enough to warrant specialized treatment. Providing formal training to clinicians may prove beneficial in early identification and initiation of timely care and referral of adolescents in need.³⁰ These recommendations have been summarized in **Table 1**.

In conclusion, adolescents who use substances are a disadvantaged, difficult-to-reach population at risk of several negative consequences given the personal, psychological, and socio-economic challenges presented by the COVID-19 pandemic. There is an urgent need for systematic studies and understanding these challenges and an equally urgent need for preventive and treatment strategies specialized for this population, keeping in mind the altering needs of adolescents who use substances in this changing scenario.

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