



# Preventive Strategies for Substance use in Children and Adolescents

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## INTRODUCTION

Substance use is frequently initiated during the formative years of one's life as adolescence is associated with high novelty-seeking and risk-taking behavior. Psychosocial and biological vulnerabilities predispose individuals of this age towards experimentation and long-lasting adverse consequences. There has been an increasing trend toward early initiation of drug use.<sup>[1]</sup>

Two-fifth of the Indian population falls under the age group of 18 years, rendering the initiatives and policies for this age group even more important.<sup>[2]</sup> Substantial brain changes occur in this age group and psychosocial transitions or biological transitions like completing studies, attaining puberty and initiating sexual relations often occur in this age group.<sup>[3]</sup> Up to half of the psychological problems begin before 14 years of age.<sup>[4]</sup> A larger proportion of substance use start during adolescence, alcohol, tobacco and inhalants being common substances and with having greater behavioral problems.<sup>[5,6]</sup>

Most data and studies come from the developed part of the world and there is little research from the low- and middle-income countries (LAMIC) even though the poor and marginalized sections of the society remain most adversely affected by drug use problems and long-term adverse effects.<sup>[7]</sup>

World Drug Report, 2021 predicted that the post-COVID economic crisis might accelerate illegal production and consumption of illegal substances. Drug markets remained resistant to COVID-related restrictions and measures.<sup>[8]</sup> Lesser number of younger individuals perceived cannabis to be a harmful substance in recent years as per studies and a drastic increase in use of cannabis was seen amongst young individuals.<sup>[9]</sup>

## Risk Factors and Vulnerability

Adverse life events such as neglectful parenting, parental or sibling substance use, physical or sexual abuse, and externalizing disorders may lead to early-onset drug use. Poor socio-economic status and marginalization in society remain other important risk factors.<sup>[10]</sup>

The necessity and increasing universality of internet use amongst children and adolescents has raised additional concerns. A variety of drugs, including illicit drugs, are readily available over the internet (darknets). Cannabis remains

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the most common substance traded through this means.<sup>[11]</sup>

Besides the adverse effects on health due to acute intoxication, this age group is more likely to experience long-term effects like developing neurobiological changes, adulthood health scares and serious drug dependence. Risks of accidents under the influence of alcohol, polysubstance use, violence, affective and anxiety disorders, self-harm, blood-borne infections, cognitive impairments, delinquency and overdoses are enhanced when substances are initiated in this age group. Also, educational attainment and family ties are more likely to be adversely affected.<sup>[12]</sup>

## Public Health Initiatives and Preventive Strategies

Prevention strategies for substance use in this age would include scheduling of substances under international conventions that prohibit their uses for non-medical reasons, availability and sales restriction, setting a minimum legal age for use, taxation, ban on advertisements for these products, mass media campaigns, psychological interventions targeting schools, and their families.<sup>[13]</sup> Restrictions on tobacco smoking has helped to reduce smoking in public places.<sup>[14]</sup> Reduction in the minimum age for legal drinking might help reduce alcohol-related accidents and mortality but the evidence is not enough to support fines and community service in the reduction of alcohol use.<sup>[15]</sup> For alcohol and tobacco there is good evidence to show that increasing taxation or price reduces the consumption of these substances.<sup>[16]</sup> Better quality studies are needed to show whether banning alcohol advertising reduces consumption, but there is sufficient evidence showing the effectiveness of tobacco advertising restrictions.<sup>[17]</sup>

## Other Interventions

School, family, community are at different levels for implementing various preventive strategies.<sup>[18]</sup> School-based awareness programs promote knowledge regarding use of illicit substances. Skill-based programmes and multimodal approaches, including multiple persons from the community might be more helpful.<sup>[19]</sup> The basic approaches are school-based preventive programs involving social skills, assertiveness, education attainment,

and appropriate response to the social milieu and cultural pressure. These approaches mainly focus on teaching assertiveness, active coping, problem-solving and social skills.<sup>[20]</sup>

There is evidence for high-intensity family-based interventions for a reduction in tobacco use by young people.<sup>[21]</sup> Family-based approaches encompass healthy parenting, parental bonding, communication and supervision.<sup>[20,22]</sup> Vaccinations, needle and syringe programmes and similar approaches might be very helpful in preventing viral hepatitis and HIV transmission. For psychosocial interventions quality of evidence in substance use disorder for this age group remains poor.<sup>[23]</sup>

A multipronged approach should be used for public health awareness and skill building of Primary care Physicians and Paediatricians for comprehensive screening, initial management and timely referral of children with substance use.<sup>[24]</sup>

To conclude, most research comes from the developed world, while literature from low- and middle-income countries remains sparse. Alcohol and tobacco are the most commonly used substances in this age group, followed by inhalants, cannabis and other illicit drugs, although there are some variations depending on the world region. Parental substance use disorders and adversities in childhood and adolescence remain the biggest risk factors for substance use in children. The availability of illicit substances over the dark net is another emerging problem as the internet gradually becomes indispensable in the lives of young people. Public health initiatives and early screening have been found to be helpful and certain psychosocial interventions have shown promise. Therefore, proactive holistic steps must be taken for the prevention of substance use in future generations of our nation.

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