



SUBSTANCE USE IN ADOLESCENTS

LAURA JACKSON, PA-S2
Oregon Health and Science
University

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Healthy People 2020: Substance Use in the U.S.

Substance use is increasing at an alarming rate in the United States and has created a great deal of hardship on the nation's economy and the health of its citizens. Over the last few decades substance use has led to an increasing number of deaths, crime rates, health care costs, and loss of productivity; all of which have cost over \$400 billion each year in the US¹. *Healthy People 2020* addresses the "social, physical, mental, and public health problems" associated with substance use with the goal of preventing and reducing substance abuse². While adults make up the majority of the population using substances, *Healthy People 2020*, the *Center for Disease Control (CDC)*, and the *Surgeon General's Report* all recognize substance abuse as a problem that often starts in adolescence and progresses through adulthood^{1,2,3}. Since the majority of adult users admit to abusing substances during their adolescent years, the focus of this paper is geared towards educating adolescents (12-17 years old) on the risks associated with substance use, what protective factors can help prevent using, and what interventions have proven to be the most successful at preventing substance use³.

Sadly only 1 in 10 people abusing substances receive any type of treatment¹. It's important to educate adolescents how misusing substances in their teen years can lead to substance abuse later in life which negatively impacts their ability to gain employment, maintain healthy relationships, have children, and live a life free from addiction¹. Knowing the risk factors, warning signs, and how to intervene is critical for decreasing the prevalence of substance use.

Statistics in Adolescents

According to the Substance Abuse and Mental Health Services Administration (SAMHSA) surveying adolescents (12-17 years old) in the U.S: 567,000 misused prescription pain relievers, 10,000 used heroin, 34,000 used cocaine, 41,000 used methamphetamine, 279,000 used LSD, and 2.3 million adolescents used alcohol during the year of 2019⁴. Looking at individuals 12 years and older who tried substances for the first time in 2019, SAMHSA found 3.5 million people tried marijuana, 1.6 million tried cigarettes, 1.2 million tried hallucinogens, 1.6 million tried prescription pain relievers, 4.9 million tried alcohol, 949,000 misused prescription tranquilizers, and 901,000 misused prescription stimulants⁴. In comparison to 2016, SAMHSA found that the rates of prescription misuse, alcohol and illicit drugs have declined over the last 3 years, however even with this decline substance use is still a challenging issue impacting adults and adolescents. *Healthy People 2020* also referred to this decline in substance use but pointed out that it is still an emerging issue that requires “every effort” in order to continue the downward trend². If every effort isn’t made to prevent substance use in adolescents, the rates of substance abuse in adulthood will increase again in the upcoming years.

Terminology

Substance use, substance abuse, substance use disorder (SUD), substance misuse, high-risk substance use, and addiction are all terms often used in literature to describe a similar problem however they have very different meanings. Substance use refers to the consumption of prescription drugs for non-prescription purposes, alcohol, or illicit drugs³. Substance abuse (also called “substance misuse” or “high-risk substance use”) refers to substance use despite harmful or negative consequences to the user (injury, incarceration, suicide, etc.)³. Substance use disorder

(also called “addiction”) is a “medical illness” from repeated substance abuse and involves impairments in decision making, cognitive functioning, behavioral and psychological processing³. The focus of this paper will be on addressing two terms, substance use and substance abuse in adolescents, as it presents in the objectives of *Healthy People 2020*.

Risk Factors

There are numerous factors that place adolescents at risk for substance abuse. These risk factors include starting alcohol or drugs at a young age, personal distress and defiant behavior, positive perceptions towards substances, peer pressure, conflicts with family members, struggling with academics, ease of availability obtaining substances, low perceived risk, accepting substance use as the “norm”, media portrayal, and living in areas of high crime¹.

Demographics also play a significant role in substance use in adolescents with populations in the South, Midwest, and of lower socioeconomic status having higher rates of substance abuse⁵.

According to the *National Survey on Drug Use and Health (NSDUH)*, adolescents living in rural areas have a 35% greater chance of misusing prescription pain relievers compared to those from urban communities⁵. This stark contrast in demographics could be due to less available resources for treatment, less education on substance use, and the “norm” of that area; if an adolescent’s parents and friends are using substances, they too are likely to view substance use as part of daily life.

According to the *Surgeon General’s Report* substance misuse can result in higher rates of crime, motor vehicle accidents, poor judgement, intimate partner violence, dangerous behaviors, suicide attempts, overdoses, child abuse, teenaged pregnancies, STD’s, and heart and liver disease¹. Substance abuse can also have negative impacts on neurocognitive development in the

brain and can lead to significant impairment as an adult; this impairment can lead to mental health disorders in addition to substance use disorders; a growing problem we're continuing to see today with the homeless community³. Depression, anxiety, ADHD, adjustment disorders, hypomania, psychosis, and suicidality were amongst the most common mental health issues associated with substance use⁶. Sadly according to *Healthy People 2020*, approximately 95% of individuals who abuse substances are not aware that they even have a problem.

Interventions and Resources

The *CDC*, *SAMHSA*, *Surgeon General's Report*, and *Healthy People 2020* all call for the same recommendations: increase awareness, implement prevention policies, increase access to care, provide support for relapses, and create effective interventions to prevent substance misuse. A study published in the *Journal of Adolescent Health* reviewed a total of 46 systematic reviews to find out which intervention program was the most effective at reducing substance use. This article discusses the effectiveness of school-based interventions, family/community-based interventions, policy interventions, digital platforms, and incentives towards reducing substance abuse in adolescents⁷. The goal of these interventions is to identify early on which risk factors are modifiable, which adolescents are considered high-risk, and which protective factors should be focused on⁷. This study looked at both the risky behaviors and the preventive interventions to best address these risks. Lack of protection during sex, violence, drunk driving, speeding, obesity, mental health issues, and poor nutrition were identified as placing adolescents at higher risk for substance abuse. Providing education on healthy reproductive behaviors, smoking cessation, nutrition, immunizations, mental health stigmas, injury prevention as well as increasing access to healthcare services to address these issues were incredibly effective in

reducing substance use⁷. Interestingly this study found that school-based interventions that incorporated antidrug information, educated students on self-management skills, encouraged refusal of substances, and promoted a more positive school atmosphere, saw the greatest decline in smoking, tobacco use, alcohol, illicit drugs and combined substance use in adolescents⁷.

The *Surgeon General's Report* described three main types of prevention interventions found to be most useful in adolescents: universal, selective, and indicated¹. Universal interventions are described as using preventative efforts to reduce health problems associated with substance abuse for a population as a whole. Examples of this include promoting positive social influences both through media outlets and around the community, reinforcing a minimum legal drinking age (ex. checking everyone's ID for anyone who looks between the ages of 21-40), reducing the availability of substances, providing greater access to mental health services, and reducing the negative stigma of seeking treatments for substance abuse, addiction or mental health disorders.

Selective interventions are more specific to high-risk populations, typically those in areas of low socioeconomic status, high crime rates, poverty, homelessness, and those living with depressed or substance-using parents¹. Selective interventions focus on the particular area where an adolescent is struggling; this can be focusing on improving social skills, providing behavioral health resources, or reducing exposure to other risk factors (ex. enrolling a student in an after-school program to keep them off the streets). Lastly indicated interventions are targeted at adolescents who already possess a risky behavior but haven't developed a problem yet; examples of this include providing contraceptive counseling for those who plan to continue practicing risky sexual behaviors, educating about clean needle exchanges for those who continue to inject

drugs, or providing education on the risks associated with continued substance abuse in someone who has recently started using substances.

NIDA has an excellent guide titled, *Preventing Drug Use among Children and Adolescents: A Research-Based Guide*, designed for parents, educators, and community leaders on how to recognize and talk to adolescents about substance use. This guide addresses the importance of recognizing risk factors, warning signs, and how to prevent situations where youths feel vulnerable and turn to alcohol, tobacco, or illicit drugs⁸. *Healthy People 2020* also reinforces the idea that evidence-based strategies are the most effective way to address substance abuse. *NIDA* developed a list of preventative strategies and emphasized the importance of using “protective factors” to intervene and prevent substance abuse; these include encouraging parental support, family bonding, academic support, discipline, and proper adult supervision for adolescents⁸. Programs such as, *Adolescent Transitions*, *Early Risers “Skills for Success”*, *Strengthening Families Program for Parents and Youth*, *Life Skills Training program*, *Caring School Community Program*, and *Project Towards No Drug Use*, are all successful prevention programs in schools, communities, and in families. These programs work on reinforcing positive behavior, social skills, self-control, communication, problem solving, relationships, and education on the negative consequences of substance use⁸. *NIDA* suggested these type of programs be implemented as early as preschool to start addressing which modifiable risk factors are associated with future drug or alcohol use. While the last couple paragraphs have discussed helpful interventions, the next several paragraphs describe programs and resources that research has found to be the most successful in reducing rates of substance use amongst adolescents.

LifeSkills Training is a highly research-validated school program incorporated over 3 years with the goal of reducing alcohol, tobacco, and drug use as well as violence in adolescents⁹. This program is supported by over 30 scientific studies and recognized by the U.S Department of Education and the Center for Substance Abuse Prevention for its success in delaying early use of alcohol, tobacco, and other substance use. *LifeSkills Training* focuses on teaching students to resist peer pressure, to enhance self-esteem, to cope with stressors, and to recognize and prevent risky behaviors⁹. *LifeSkills Training* recognizes three critical areas in preventing substance use in adolescents: drug resistance, personal self-management, and general social skills⁹. Throughout this program, students are taught the common false perceptions of substance use, turning down substances, setting goals, making healthy decisions, feeling comfortable with personal challenges, communicating effectively, and being assertive in peer-pressure type of situations⁹. A 2013 research trial was conducted over 57 middle schools with similar rates of smoking, alcohol, and marijuana use amongst students. Students were randomly assigned to a control group and a *LifeSkills Training* group where those in the *LifeSkills Training* received education on the consequences of smoking, alcohol and marijuana use and how to resist peer pressure¹⁰. In 2019, 6 years after the start of the study, students who received the *LifeSkills Training* while in middle school were 19% less likely to smoke cigarettes weekly, 21% less likely to smoke a pack-a-day, 16% less likely to get drunk one or more times per month, and 33% less likely to use marijuana weekly¹⁰.

According to the *Surgeon General's Report* the best form of treatment is early identification of an SUD with the knowledge of healthcare providers, families, and the adolescents themselves. Behavioral therapies, evidence-based medications, and supportive services have proven very effective in treating those with co-occurring substance use and

physical or mental disorders¹. The goals of treatment for both substance use disorders and co-occurring psychiatric disorders should be to identify the disorder through screening, reduce the patient's symptoms, and improve the function and overall quality of life¹. While medications exist to treat alcohol and opioid use disorders, there are currently no FDA medications available to treat disorders involving cannabis, cocaine, methamphetamine, or other substances¹.

SAMSHA is a great source for communities looking to provide information on medication-assisted treatments, funding, addiction technology transfer centers, federal policies, publications, media campaigns, parental guides, as well as resources from national organizations¹². *Tips for Teens* is available on the SAMHSA webpage and is an excellent resource geared towards adolescents on the implications of misusing drugs, alcohol, cannabis, opioids, tobacco, and alcohol¹². *Kelty Mental Health Resource Centre* is a helpful resource designed for parents and adolescents to provide education on healthy lifestyle choices, therapy, mental health challenges, and the various types of substance categories¹³. This source also helps parents recognize the physical and mental signs of drug use, how to talk with their child, and where to seek treatment. Communities can also work to provide high-risk families with available resources for treatment and prevention whether that's through transportation, financial assistance, or increasing access to services⁸.

Various forms of treatment programs are available based on the needs of the adolescent. Depending on the type of SUD and whether or not the patient has a co-occurring disorder will determine which route is best for them. Individual and family counseling, day treatment programs, residential programs, medications, opiate treatment programs, peer services, and psychotherapy are a few of the various treatment options available^{12,13}. National helplines are

available to offer support to anyone experiencing a personal crisis or thinking about relapsing. SAMHSA, American Addiction Centers, and USA.gov have their own national helplines available on their website where adolescents often have the option to call or text when they need to reach out. The Recovery Village also has a 24 hour Teen helpline as well as links to available hotlines based on the state the adolescent lives in¹⁴.

Conclusion

The most effective interventions and treatment strategies are ones that treat substance abuse as an illness rather than “poor judgement”¹. It’s crucial to educate adolescents about the longstanding challenge of substance use and how it impacts every aspect of their lives. It’s important to show just how prevalent substance use is and how this can transcend to a lifelong battle with addiction, homelessness, financial hardship, and mental and physical illness. Educating adolescents on the resources available (hotlines, programs, interventions, and support groups) can provide direction when they are experiencing the need to use substances. *Healthy People 2020*, *CDC*, *SAMSHA*, and *NIDA* have all set out to increase awareness, offer interventions, and provide support when adolescents start using or relapse. A shift in how we view substance use, investing in scientific research for programs, and creating an open environment where adolescents feel safe to speak up is key to tackling this national crisis and saving countless lives.

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