Adolescence (12 to 17 years) is a critical and vulnerable stage of human development, during which males and females experience different biological, social, and cognitive changes. During this life stage, millions of adolescents experiment with substance use and engage in behaviors that can affect healthy neurological and psychological development. Understanding the behavioral health differences between adolescent males and females can help to inform public health policy and build prevention and intervention programs that strategically target the different needs of adolescent males and females.

**Highlights: Adolescents in Missouri**

- Approximately 52,000 (10.5 percent) of adolescents in Missouri used an illicit drug in the past month; 36,000 (7.4 percent) used marijuana, and 27,000 (5.5 percent) used an illicit drug other than marijuana.
- 19.4 percent of adolescents (95,000) used alcohol in the past month, and 12.8 percent (63,000) engaged in binge drinking.
- Rates of alcohol and drug dependence or abuse were similar between males and females; 25,000 males and 21,000 females abused or were dependent on alcohol or drugs in the past year.
- 23,000 adolescents needed but did not receive treatment for past-year drug problems, and 32,000 adolescents needed but did not receive treatment for alcohol problems.
Adolescent females were more than three times as likely as adolescent males to have experienced a major depressive episode (MDE) in the past year (15.1 v. 4.8 percent).

The data described in the Adolescent Behavioral Health reports derive principally from national surveys conducted by the Office of Applied Studies, a component of the Substance Abuse and Mental Health Services Administration. Sources for all data used in this report appear at the end.

Adolescent Risk Perceptions

One factor that can influence adolescents’ decisions to use or not use tobacco, alcohol, or illicit drugs is the extent to which youths believe these substances might cause them harm. The National Survey on Drug Use and Health (NSDUH) asks respondents how much they thought people risk harming themselves physically and in other ways when they use various substances in certain amounts or frequencies.

Combined 2003–2006 NSDUH revealed that Missouri adolescents were similar to those of the Nation as a whole; that is, nationwide adolescents perceive:

- Smoking one or more packs of cigarettes per day is a greater risk than binge drinking once or twice a week.
- Binge drinking once or twice a week is perceived to be more risky than smoking marijuana once a month.
- Nationwide and in Missouri, the rates of the perception of risk associated with smoking one or more packs of cigarettes per day, binge drinking one to two times per week, and using marijuana once a month were significantly higher for adolescent females than for adolescent males (Chart 1).

Illicit Substance Use

Marijuana is the most commonly used illicit drug in the United States. According to the combined 2003–2006 NSDUH:

- Approximately 52,000 (10.5 percent) of the 491,000 adolescents in Missouri used an illicit drug in the past month; 36,000 (7.4 percent) used marijuana, and 27,000 (5.5 percent) used an illicit drug other than marijuana (Chart 2).
- There were no significant differences in illicit drug use between adolescent males and females in Missouri.

The misuse of pain relievers among youth is also a major public health concern.

- In Missouri, 19,000 adolescent males and 18,000 adolescent females used pain relievers nonmedically in the 12 months prior to the interview (Chart 3).
- There was no significant difference in rates of nonmedical pain reliever use between females and males (7.4 v. 7.7 percent).
Adolescent Alcohol Use and Abuse in Missouri

- 19.4 percent of adolescents (95,000) used alcohol in the past month, and 12.8 percent (63,000) engaged in binge drinking. Binge drinking is defined as 5 or more drinks on the same occasion on at least 1 day of past 30 days.
- Rates of current alcohol use and past-month binge drinking among Missouri adolescents were similar between males and females; 20.6 percent of males and 18 percent of females currently used alcohol, and 14.8 percent of males and 10.8 percent of females engaged in binge drinking in the month prior to the interview (Chart 4).

![Chart 4: Past-Month Alcohol Use Among Adolescents: Missouri 2003–2006](image)


Adolescent Tobacco Use

- During the month prior to the interview, 38,000 females and 42,000 males in Missouri used cigarettes, and 52,000 males and 42,000 females used any form of tobacco.
- Rates of past-month tobacco use behaviors were similar between Missouri males and females.

![Chart 5: Past-Month Tobacco Product Use Among Adolescents: Missouri 2003–2006](image)

Adolescent Alcohol and Illicit Drug Dependence or Abuse

According to the 2003–2006 NSDUH:

- Nationwide nearly 1.5 million adolescents were dependent on or abused alcohol in the past year and more than 1.2 million adolescents were dependent or abused illicit drugs.

- Overall, the rates of past-year abuse or dependence on alcohol were significantly higher for females than males (6.0 v. 5.4 percent), but rates of past-year abuse or dependence on illicit drugs were similar between males and females.

- In Missouri, rates of alcohol and drug dependence or abuse were similar between males and females; 25,000 males and 21,000 females abused or were dependent on alcohol or drugs in the past year (Chart 6).

![Chart 6: Rates of Past-Year Alcohol and Illicit Drug Abuse or Dependence Among Adolescents: Missouri 2003–2006](chart)


ADOLESCENT SUBSTANCE ABUSE TREATMENT

State treatment data for substance use disorders are derived from two primary sources: (1) National Survey of Substance Abuse Treatment Services (N-SSATS), an annual 1-day census of clients in treatment and (2) the Treatment Episode Data Set (TEDS), which provides information on annual treatment admissions.
According to the 2006 N-SSATS survey:

- Missouri showed a 1-day total of 20,163 clients in treatment, the majority of whom (18,221 or 90.4 percent) were in outpatient treatment. Of the total number of clients in treatment on this date, 2,134 (10.6 percent) were under the age of 18.

According to 2003–2006 TEDS data:

- Adolescent males accounted for 68.5 percent (9,256) of the 13,506 total adolescent substance abuse treatment admissions.
- Of the total adolescent male admissions, 53.5 percent were drug treatment, 42.2 percent were alcohol and drug treatment, and 4.2 percent were alcohol treatment.
- Of the total female admissions, 51.6 percent were drug treatment admissions, 41.5 percent were alcohol and drug treatment, and 6.8 percent were alcohol treatment (Chart 7).

Among adolescent admissions, marijuana and alcohol were the most prevalent substances of abuse.

- Of the total adolescent male admissions, 92.4 percent (8,557) reported marijuana use, and 46.5 percent (4,300) reported alcohol use.
- Of the total adolescent female admissions, 85.2 percent (3,667) percent reported marijuana use, and 48.4 percent (2,082) reported alcohol use.
- Further, 7.1 percent (957) of the total adolescent admissions reported cocaine use, 5.7 (525) percent of male admissions and 10 (432) percent of female admissions. Also, 8.8 percent of total admissions reported methamphetamine use, 6.6 (607) percent of male admissions and 13.6 (586) percent of female admissions (Charts 8 and 9).
UNMET NEED FOR SUBSTANCE ABUSE TREATMENT

NSDUH 2003–2006 estimates that more than 1.16 million adolescents needed but did not receive treatment for illicit drug problems and more than 1.3 million needed but did not receive treatment for alcohol problems. NSDUH defines “unmet treatment need” as an individual who meets the criteria for abuse of or dependence on illicit drugs or alcohol according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV), but who has not received specialty treatment for that problem in the past year.

In 2003-2006,

• There were no significant differences in rates of the unmet need for treatment between males and females.

• 23,000 Missouri adolescents (11,000 males and 12,000 females) needed but did not receive treatment for past-year drug problems (Chart 10).

• 15,000 females (6.2 percent) and 17,000 males (6.9 percent) needed but did not receive treatment for alcohol problems (Chart 11).
ADOLESCENT MENTAL HEALTH

Major Depressive Episodes

NSDUH uses the DSM-IV to define a “major depressive episode” as a period of 2 or more weeks during which the individual experiences loss of interest, depressed mood, or loss of pleasure, and four or more additional symptoms.

- MDEs impacted more than 2.1 million adolescents nationwide in the year prior to the 2004–2006 NSDUH surveys.
- Overall, adolescent females were almost three times more likely than adolescent males to experience a past-year MDE (12.7 v. 4.6 percent).

Major Depressive Episodes Among Missouri Adolescents

From 2004–2006, approximately 486,000 adolescents lived in Missouri; 248,000 males and 238,000 females.

- During this time period, the prevalence patterns of MDEs among adolescent males and females in Missouri were similar to the national patterns; adolescent females in Missouri were more than three times as likely as adolescent males to have experienced an MDE in the past year (15.1 v. 4.8 percent) (Chart 12).

Adolescent Mental Health Treatment in Missouri

- In 2006, Missouri State Mental Health Authority (MSMHA) served 16,863 youth aged birth to 17 years, primarily through community programs.
- MSMHA clients aged birth to 17 years accounted for 22.5 percent of MSMHA’s total client population in 2006.
**For Further Information**

*Adolescent Behavioral Health in the United States:*


A comprehensive listing of all NSDUH measures for every State is available at: [http://oas.samhsa.gov/statesList.cfm](http://oas.samhsa.gov/statesList.cfm).

Also, information about variations in incidence and prevalence of the NSDUH substance abuse and mental health measures within each State is available at: [http://oas.samhsa.gov/metro.htm](http://oas.samhsa.gov/metro.htm).

**Data Sources**


Substance Abuse Treatment Data: Treatment Episode Data Set–Concatenated File–is available from the Substance Abuse and Mental Health Data Archive: [http://www.icpsr.umich.edu/SDA/SAMHDA](http://www.icpsr.umich.edu/SDA/SAMHDA).

NSDUH is directed by the Substance Abuse and Mental Health Services Administration and provides information on the incidence and prevalence of substance use in the population and the problems associated with use. The survey collects information on the sociodemographic characteristics of users, perceptions of risk and availability, and mental health issues. Since 1999, the NSDUH sample has been designed to provide State-level estimates, based on about 67,500 respondents per year.

NSDUH defines “illicit drugs” to include marijuana/hashish, cocaine (including crack), inhalants, hallucinogens, heroin, or prescription-type drugs used nonmedically. “Nonmedical” use is defined as use not prescribed for the respondent by a physician or used only for the experience or feeling the drug(s) caused. Nonmedical use of any prescription-type pain reliever, sedative, stimulant, or tranquilizer does not include over-the-counter drugs. Non-medical use of stimulants includes methamphetamine use.


Questions in NSDUH are used to classify persons as being dependent on or abusing specific substances based on criteria specified in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) (American Psychiatric Association, 1994).

The National Survey of Substance Abuse Treatment Services (N-SSATS) is designed to collect information from all facilities in the United States, both public and private, that provide substance abuse treatment. N-SSATS does not collect information from the following three types of facilities: nontreatment halfway houses; jails, prisons, or other organizations that treat incarcerated clients exclusively; and solo practitioners.

TEDS is an admissions-based system, and TEDS admissions do not represent individuals. For example, an individual admitted to treatment twice within a calendar year would be counted as two admissions. TEDS collects information on up to three substances of abuse that lead to the treatment episode. These are not necessarily a complete enumeration of all drugs used at the time of admission.

The Uniform Reporting System (URS) consists of 21 standardized tables (12 basic tables and 9 developmental tables) that State mental health agencies (SMHA) submit each December in their Community Mental Health Services Block Grant Implementation Report to the Substance Abuse and Mental Health Services Administration’s Center for Mental Health Services. The URS data submitted by the States has been used to create 14 different output tables that show performance on issues of access, appropriateness, outcomes, and system management. The intent of the URS tables is to allow both (1) the tracking of individual State performance over time, and (2) the aggregation of State information to develop a national picture of the public mental health systems of the States.