

Drug Use in Modern Society

The interaction between drugs and behavior can be approached from two general perspectives. Certain drugs, the ones we call psychoactive, have profound effects on behavior. Part of what a book on this topic should do is

describe the effects of these drugs *on behavior*, and later chapters do that in some detail. Another perspective, however, views drug taking as *behavior*. The psychologist sees drug-taking behaviors as interesting examples of human behavior that are influenced by many psychological, social, and cultural variables. In the first section of this text, we focus on drug taking as behavior that can be studied in the same way that other behaviors, such as aggression, learning, and human sexuality, can be studied.

- 1 Drug Use: An Overview**
Which drugs are being used and why?
- 2 Drug Use as a Social Problem**
Why does our society want to regulate drug use?
- 3 Drug Products and Their Regulations**
What are the regulations, and what is their effect?

1

Drug Use: An Overview

“The Drug Problem”

Talking About Drug Use

“Drug use on the rise” is a headline that has been seen quite regularly over the years. It gets our attention. At any given time the unwanted use of some kind of drug can be found to be increasing, at least in some group of people. How big a problem does the current headline represent?

Before you can meaningfully evaluate the extent of such a problem or propose possible solutions, it helps to define what you’re talking about. In other words, it helps to be more specific about just what the problem is. Most of us don’t really view the problem as drug use, if that includes your Aunt Margie’s taking two aspirins when she has a headache. What we really mean is that some drugs being used by some people or in some situations constitute problems with which our society must deal.

Journalism students are told that an informative news story must answer the questions *who, what, when, where, why, and how*. Let’s see

Objectives

When you have finished this chapter, you should be able to:

- **Develop an analytical framework for understanding any specific drug-use issue.**
- **Apply four general principles of psychoactive drug use to any specific drug-use issue.**
- **Explain the differences between misuse, abuse, and dependence.**
- **Describe how four revolutions in pharmacology have helped to shape attitudes about drugs.**
- **Describe the general trends of increases and decreases in drug use in the U.S. since 1975.**
- **Remember several correlates and antecedents of adolescent drug use.**
- **Describe correlates and antecedents of drug use in the terminology of risk factors and protective factors.**
- **Discuss motives that people may have for illicit and/or dangerous drug-using behavior.**

how answering the same questions plus one more question—*how much*—can help us analyze problem drug use.

- *Who* is taking the drug? We are more concerned about a 15-year-old girl drinking a beer than we are about a 21-year-old woman doing the same thing. We worry more about a 10-year-old boy chewing tobacco than we do about a 40-year-old man chewing it (unless we happen to be riding right behind him when he spits out the window). And, although we don’t like anyone taking heroin, we undoubtedly get



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more upset when we hear about the girl next door becoming a user.

- *What* drug are they taking? This question should be obvious, but often it is overlooked. A simple claim that a high percentage of students are “drug users” doesn’t tell us if there has been an epidemic of methamphetamine use or if the drug referred to is alcohol (more likely). If someone begins to talk about a serious “drug problem” at the local high school, the first question should be “what drug or drugs?”
- *When* and *where* is the drug being used? The situation in which the drug use occurs often makes all the difference. The clearest example is the drinking of alcohol; if it is confined to appropriate times and places, most people accept drinking as normal be-



Our concern about the use of a substance often depends on who is using it.

havior. When an individual begins to drink on the job, at school, or in the morning, that behavior is evidence of a drinking problem. Even subcultures that accept the use of illegal drugs might distinguish between acceptable and unacceptable situations; some college-age groups might accept marijuana smoking at a party but not just before going to a calculus class!

- *Why* a person takes a drug or does anything else is a tough question to answer. Nevertheless, it is important in some cases. If a person takes Vicodin because her doctor prescribed it for the knee injury she got while skiing, most of us would not be concerned. If, on the other hand, she takes that drug on her own, just because she likes the way it makes her feel, then we should begin to worry about possible abuse of the drug. The motives for drug use, as with motives for other behaviors, can be complex. Even the person taking the drug might not be aware of all the motives involved. One way a psychologist can try to answer *why* questions is to look for consistency in the situations in which the behavior occurs (when and where). If a person drinks only with other people who are drinking, we may suspect social motives; if a person often drinks alone, we may suspect that the person is trying to deal with personal problems by drinking.
- *How* the drug is taken can often be critical. South American Indians who chew coca leaves absorb cocaine slowly over a long period. The same total amount of cocaine “snorted” into the nose produces a more rapid, more intense effect of shorter duration and probably leads to much stronger dependence. Smoking cocaine in the form of “crack” produces an even more rapid, intense, and brief effect, and dependence occurs very quickly.
- *How much* of the drug is being used? This isn’t one of the standard journalism questions, but it is important when describing drug use. Often the difference between



Drugs in the Media

Reporting on the “Drug du Jour”

At the beginning of this millennium, newspaper and television stories about drugs are dominated by the so-called **club drugs**, such as Ecstasy and GHB. Before that there was a wave of media reports about crystal meth and other forms of methamphetamine. In the mid-1980s, it was crack cocaine. Of course these waves of media focus are associated with waves of drug use, but the news media all seem to jump on the latest “drug du jour” (drug of the day) at the same time. For example, the U.S. Drug Enforcement Administration (DEA) announced in 2000 that the club drugs were its highest priority, and this means more news stories about arrests of distributors for these types of drugs.

One question that doesn’t get asked much is this: What role does such media attention play in popularizing the current drug fad, perhaps making it spread farther and faster than would happen without the publicity? About 30 years ago, in a chapter titled “How to Create a Nationwide Drug Epidemic,” journalist

E. M. Brecher described a sequence of news stories that he believed were the key factor in spreading the practice of sniffing the glues sold to kids for assembling plastic models of cars and airplanes (see *volatile solvents* in Chapter 7). He argued that, without the well-meant attempts to warn people of the dangers of this practice, it would probably have remained isolated to a small group of youngsters in Pueblo, Colorado. Instead, sales of model glue skyrocketed across America, leading to widespread restrictions on sales to minors.

Thinking about the kinds of things such articles often say about the latest drug problem, are there components of those articles that you would include if you were writing an advertisement to promote use of the drug? Do you think such articles actually do more harm than good, as Brecher suggested? If so, does the important principle of a free press mean there is no way to reduce the impact of such journalism?

what one considers normal use and what one considers abuse of, for example, alcohol or a prescription drug comes down to how much a person takes.

Four Principles of Psychoactive Drugs

Now that we’ve seen how helpful it can be to be specific when talking about drug use, let’s look for some organizing principles.

Are there any general statements that can be made about **psychoactive** drugs—those compounds that alter consciousness and affect mood? Four basic principles seem to apply to all of these drugs.

1. *Drugs, per se, are not good or bad.* There are no “bad drugs.” When drug abuse, drug dependence, and deviant drug use are talked about, it is the behavior, the way the drug is being used, that is being referred to. This statement sounds controversial and has angered some prominent political fig-

ures and drug educators. It therefore requires some defense. For a pharmacologist, it is difficult to view the drug, the chemical substance itself, as somehow possessing evil intent. It sits there in its bottle and does nothing until we put it into a living system. From the perspective of a psychologist who treats drug users, it is difficult to imagine what good there might be in heroin or cocaine. However, heroin is a perfectly good painkiller, at least as effective as morphine, and it is used medically in many countries. Cocaine is a good local anesthetic and is still used for medical procedures, even in the United States. Each of these drugs can also produce bad effects when people abuse them. In the cases of heroin and cocaine, our society has weighed its perception of the risks of bad consequences against the potential benefits and decided that we should severely restrict the availability of these substances. It is wrong,

though, to place all of the blame for these bad consequences on the drugs themselves and to conclude that they are simply “bad” drugs. Many people tend to view some of these substances as possessing an almost magical power to produce evil. When we blame the substance itself, our efforts to correct drug-related problems tend to focus exclusively on eliminating the substance, perhaps ignoring all of the factors that led to the abuse of the drug.

2. *Every drug has multiple effects.* Although a user might focus on a single aspect of a drug’s effect, we do not yet have compounds that alter only one aspect of consciousness. All psychoactive drugs act on more than one place in the brain, so we might expect them to produce complex psychological effects. Also, virtually every drug that acts in the brain also has effects on the rest of the body, influencing blood pressure, intestinal activity, or other functions.
3. *Both the size and the quality of a drug’s effect depend on the amount the individual has taken.* The relationship between dose and effect works in two ways. By increasing the dose, there is usually an increase in the same effects noticed at lower drug levels. Also, at different dose levels there is often a change in the kind of effect, an alteration in the character of the experience.
4. *The effect of any psychoactive drug depends on the individual’s history and expectations.* Because these drugs alter consciousness and thought processes, the effect they have on an individual depends on what was there initially. An individual’s attitude can have a major effect on his or her perception of the drug experience. The fact that relatively inexperienced users can experience a high when smoking oregano and dry oak tree leaves—thinking it’s good **marijuana**—should come as no surprise to anyone

who has arrived late at a party and felt a “buzz” after one drink rather than the usual two or three. It is not possible, then, to talk about many of the effects of these drugs independent of the user’s history and attitude and the setting.

How Did We Get Here?

Have Things Really Changed?

Drug use is not new. Humans have been using alcohol and plant-derived drugs for thousands of years—as far as we know, since *Homo sapiens* first appeared on the planet. Recorded history indicates that some of these drugs were used not just for their presumed therapeutic effects but also for recreational purposes. In some of the highly developed ancient cultures, psychoactive plants played important economic and religious roles. There is also evidence that some people have always overused, misused, or abused these substances.

Drugs play a much different role in modern society than they did even 100 years ago. Major events have occurred in pharmacology and medicine that have produced revolutionary changes in the way in which we view drugs. In addition, recent cultural revolutions have influenced our attitudes and behavior regarding drugs and drug use.

club drugs: drugs associated with use at all-night dance parties, known as “raves,” held in dance clubs, abandoned warehouses, and increasingly in more traditional nightclubs as the rave-party generation moves into its 20s. The drugs most commonly included in this group include the hallucinogen MDMA (“Ecstasy”; Chapter 14) and the depressants GHB and Rohypnol (“roofies”; Chapter 7).

psychoactive: having effects on thoughts, emotions, or behavior.

marijuana (mare i wan ah): also spelled “marihuana.” Dried leaves of the *Cannabis* plant.



Drugs in Depth

Important Definitions—and a Caution!

Some terms that are commonly used in discussing drugs and drug use are difficult to define with precision, partly because they are so widely used for many different purposes. Therefore, any definition we offer should be viewed with caution because each represents a compromise between leaving out something important versus including so much that the defined term is watered down.

The word **drug** will be defined as “any substance, natural or artificial, other than food, that by its chemical nature alters structure or function in the living organism.” One obvious difficulty is that we haven’t defined *food*, and how we draw that line can sometimes be arbitrary. Alcoholic beverages, such as wine and beer, may be seen as either drug, food, or both. Are we discussing how much sherry wine to include in beef Stroganoff, or are we discussing how many ounces of wine can be consumed before becoming intoxicated? Since this is not a cookbook but, rather, a book on the use of psychoactive chemicals, we will view all alcoholic beverages as drugs.

Illicit drug is a term used to refer to a drug that is unlawful to possess or use. Many of these drugs are available by prescription, but when they are manufactured or sold illegally they are illicit. Traditionally, alcohol and tobacco have not been considered illicit substances even when used by minors, probably because of their widespread legal availability to adults. Common household chemicals, such as glues and paints, take on some characteristics of illicit substances when people inhale them to get “high.”

Deviant drug use is drug use that is not common within a social group *and* that is disapproved of by the majority, causing members of the group to take corrective action when it occurs. The corrective action may be informal (making fun of the behavior, criticizing the behavior) or formal (incarceration, treatment). Some examples of drug use might be deviant in the society at large but accepted or even expected in particular subcultures. We still consider this behavior to be deviant, since it makes more sense to apply the perspective of the larger society.

Drug misuse generally refers to the use of prescribed drugs in greater amounts than, or for purposes other than, those prescribed by a physician or dentist. For nonprescription drugs or chemicals such as paints, glues, or solvents, misuse might

mean any use other than the use intended by the manufacturer.

Abuse consists of the use of a substance in a manner, amounts, or situations such that the drug use causes problems or greatly increases the chances of problems occurring. The problems may be social (including legal), occupational, psychological, or physical. Once again, this definition gives us a good idea of what we’re talking about, but it isn’t precise. For example, some would consider any use of an illicit drug to be abuse because of the possibility of legal problems, but many people who have tried marijuana would argue that they had no problems and therefore didn’t abuse it. Also, the use of almost any drug, even under the orders of a physician, has at least some potential for causing problems. The question might come down to how great the risk is and whether the user is recklessly disregarding the risk. How does cigarette smoking fit this definition? Should all cigarette smoking be considered drug abuse? For someone to receive a diagnosis of having a *substance abuse disorder* (see DSM-IV-TR feature in Chapter 2), the use must be recurrent, and the problems must lead to significant impairment or distress.

Addiction is a controversial and complex term that has different meanings for different people. Because the term is so widely used in everyday conversation, it is risky for us to try to give it a precise, scientific definition, and then have our readers use their own long-held perspectives whenever we use the term. Therefore, we have avoided using this term where possible, instead relying on more precisely defined terms such as *dependence*.

Drug **dependence** refers to a state in which the individual uses the drug so frequently and consistently that it appears that it would be difficult for the person to get along *without* using the drug. For some drugs and some users, there are clear withdrawal signs when the drug is not taken, implying a *physiological dependence*. Dependence can take other forms, as shown in the DSM-IV-TR feature in Chapter 2. If a great deal of the individual’s time and effort is devoted to getting and using the drug, if the person often winds up taking more of the substance than he or she intended, and if the person has tried several times without success to cut down or control the use, then the person meets the criteria for dependence.



Taking Sides

Can We Predict or Control Trends in Drug Use?

Looking at the overall trends in drug use, it is clear that significant changes have occurred in the number of people using marijuana, cocaine, alcohol, and tobacco. However, while it's easy to describe the changes once they have happened, it's much tougher to predict what will come next. Maybe even harder than predicting trends in drug use is knowing what social policies are effective in controlling these trends. The two main kinds of activities that we usually look to as methods to prevent or reduce drug use are legal controls and education (including advertising campaigns). How effective do you think laws have been in helping prevent or reduce drug

use? Be sure to consider laws regulating sales of alcohol and tobacco to minors in your analysis. What about the public advertising campaigns you are familiar with? How about school-based prevention programs? As you go through the remainder of this book, these questions will come up again, along with more information about specific laws, drugs, and prevention programs. For now, choose which side you would rather take in a debate on the following proposition: broad changes in drug use reflect shifts in society and are not greatly influenced by drug-control laws, antidrug advertising, or drug-prevention programs in schools.

Four Pharmacological Revolutions

One hundred years ago, most Americans had a very different view of medicines than we have today. Only a few drugs had powerful effects, and these were used to treat a wide variety of ailments. The idea that a drug could be a specific treatment for a specific disease was only a dream. As a consequence, most people had limited faith in the power of drugs and were cautious about using them. Our modern attitudes about drugs are based to a great extent on several important advances in pharmacology.

The first revolution brought some major communicable diseases well under control. The use of *vaccines*, which began with Pasteur, Jenner, and Koch in the 19th century, has had a major impact on our society. The deadly disease smallpox was almost entirely eliminated, and other serious diseases are virtually a thing of the past; diphtheria, polio, and whooping cough are nearly unheard of, except when we refer to the vaccines for them. Measles, mumps, and tetanus also are preventable now through the development of specific vaccines. *Vaccines helped convince the public that medicine is capable of produc-*

ing drugs with very powerful and very selective beneficial effects.

The second pharmacological revolution resulted from the introduction of *antibiotics*: “sulfa” drugs, penicillin, and then others. First proven effective during World War II, they continue to save lives daily. These drugs not only cure such previously dreaded diseases as syphilis and pneumonia but can also prevent or treat infections resulting from injury or surgery, thus saving both lives and limbs. *Antibiotics helped give us faith in drugs as effective cures for serious illnesses.* We now expect that when we get sick we will go to a physician who will prescribe a drug that will make us better.

The first two revolutions might be too pervasive and too close to home for most of us to appreciate their importance. This is not the case with the third pharmacological revolution—the development of **psychopharmacology** that began in the 1950s (see Chapter 8). The most

psychopharmacology: the study of the behavioral effects of drugs.

and universities, parties that had previously featured beer kegs now often included pills and passing around a marijuana joint. Drug use became a common theme on television and in the movies, from *Yellow Submarine* (1968) and *Easy Rider* (1969) through 1978's *Up in Smoke*.

Of course, those who were older or more conservative reacted. Richard Nixon appealed to the “silent majority” in a 1969 speech on Vietnam, and in 1971 was the first to declare a “War on Drugs.” However, the 1970s continued to be an era of greater tolerance for drug use, as indicated by the lowering of drinking ages in many states, as well as the lowering of penalties for possession of marijuana (see Chapter 15).

American society in the 1980s became less tolerant of differences, foreigners, pornography, experimental drug use, and young people questioning America's traditional ideals. Congress debated a constitutional amendment to ban the burning of the American flag. Penalties for violating drug laws, which had been loosened in the 1970s, were increased and broadened. The drinking age, which most states had lowered during the 1970s, was increased to 21 again. Authority was back, along with conformity and materialism. College students were being criticized for their focus on the dollar value of their degree rather than on the experience of learning.

The 1990s seemed largely to be a continuation of the 1980s, with a little softening of attitudes toward drugs. Marijuana use increased somewhat among high school students, but the dominant culture remained socially and politically conservative and focused on the wealth that was being generated by the stock market in general and Internet industries in particular.

Not long after the new century opened, the American economy began to slow and people began to question whether the stock market was really the answer to all our important social questions. Then the World Trade Center attack inspired a stronger sense of patriotism and “pulling together” than America had known in decades. But the broadening gap between rich and poor, continuing racial issues, and an increasingly obvious generational rift indicate



Raves are representative of youth culture and have been associated with so-called club drugs.

the potential for future cultural clashes that will have drugs and drug policy at the forefront. One issue that will help define the next cultural trend is the medicinal marijuana movement (Chapter 15). The federal government stands solidly opposed to increased availability of marijuana for medical purposes, while states are acting to allow such availability. Another issue has been that of the “rave” dance culture among youth and its association with club drugs. Federal lawmakers express horror and outrage while proposing more restrictive measures. The conflict does not appear to be only over drugs, but includes hip-hop, trance, and techno music and other aspects of youth culture that upset the mostly older people representing the dominant culture in America.

Drugs and Drug Use Today

Extent of Drug Use

In trying to get an overall picture of drug use in today's society, we quickly discover that it's not easy to get accurate information. It's not possible to measure with great accuracy the use of, let's say, cocaine in the United States. We don't really know how much is imported and sold, because most of it is illegal. We don't really know how many cocaine users there are in the country, because we have no good way of counting them. For some things, such as prescription

drugs, tobacco, and alcohol, we have a wealth of sales information and can make much better estimates of rates of use. Even there, however, our information might not be complete (homebrewed beer would not be counted, for example, and prescription drugs might be bought and then left unused in the medicine cabinet).

Let us look at some of the kinds of information we do have. A large number of survey questionnaire studies have been conducted in junior highs, high schools, and colleges, partly because this is one of the easiest ways to get a lot of information with a minimum of fuss. Researchers have always been most interested in drug use by adolescents and young adults, because this age is when drug use usually begins and reaches its highest levels.

This type of research has a couple of drawbacks. The first is that we can use this technique only on the students who are in classrooms. We

Table 1.1
Percentage of College Students One to Four Years beyond High School Reporting Use of Seven Types of Drugs (2004)

Drug	Ever Used	Used in Past 30 Days	
		Used in Past 30 Days	Used Daily for Past 30 Days
Alcohol	85	68	3.7
Cigarettes	NA	24	13.8
Marijuana/hashish	49	19	4.5
Inhalants	8	0.4	0.0
Amphetamines	13	3.2	0.2
Hallucinogens	12	1.3	0.0
Cocaine (all)	10	2.4	0.0
Crack	2.0	0.4	0.0

Source: Monitoring the Future Project, University of Michigan and Substance Abuse and Mental Health Services Administration.



Drugs in Depth

Methamphetamine Use in Your Community

Assume that you have just been appointed to a community-based committee that is looking into drug problems. A high school student on the committee has just returned from a residential treatment program and reports that methamphetamine use has become “very common” in local high schools. Some members of the committee want to call in some experts immediately to give school-wide assemblies describing the dangers of methamphetamine. You have asked for a little time to check out the student’s story to find out what you can about the actual extent of use in the community and report back to the group in a month. Make a list of potential information sources and the type of information each might provide. How close do you think you could come to making an estimate of how many current methamphetamine users there are in your community? Do you think it would be above or below the national average?

can’t get this information from high school dropouts. That causes a bias, because those who skip school or have dropped out are more likely to use drugs.

A second limitation is that we must assume that most of the self-reports are done honestly. In most cases, we have no way of checking to see if Johnny really did smoke marijuana last week, as he claimed on the questionnaire. Nevertheless, if every effort is made to encourage honesty (including assurances of anonymity), we expect that this factor is minimized. To the extent that tendencies to overreport or underreport drug use are relatively constant from one year to the next, we can use such results to reflect trends in drug use over time and to compare relative reported use of various drugs.

Let’s look first at the drugs most commonly reported by young college students in a recent nationwide sample. Table 1.1 presents data from

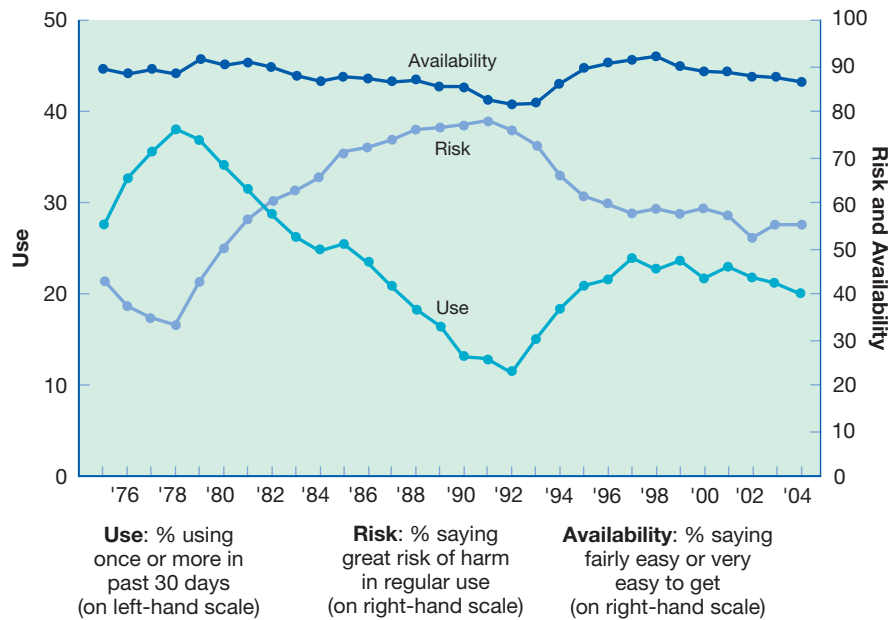


Figure 1.1 Marijuana: Trends in Perceived Availability, Perceived Risk of Regular Use, and Prevalence of Use in the Past 30 Days for 12th Graders

SOURCE: Johnston, et al. *Monitoring the Future National Survey Results on Drug Use, 1975–2004. Volume I: Secondary School Students* (NIH Publication No. 05-5727). Bethesda, MD.: National Institute on Drug Abuse, 2005.

one of the best and most complete research programs of this type, the Monitoring the Future Project at the University of Michigan. Data are collected each year from more than 15,000 high school seniors in schools across the United States, so that nationwide trends can be assessed. Data are also gathered from 8th- and 10th-graders and from college students. Three numbers are presented for each drug: the percentage of college students (one to four years beyond high school) who have *ever* used the drug, the smaller percentage who report having used it within the past 30 days, and the still smaller percentage who report *daily* use for the past 30 days.¹ Note that most of these college students have tried alcohol at some time in their lives. Half have tried marijuana, and most students report never having tried the rest of the drugs listed. Also note that daily use of any of these drugs other than cigarettes can be considered rare.

Trends in Drug Use

The high school senior survey, conducted annually for almost 30 years, demonstrates long-term trends. One of the most interesting graphs from this study looks at the prevalence of reported marijuana use in the past 30 days, and relates this to a couple of beliefs about marijuana.² Figure 1.1 shows that marijuana use among high school seniors increased from 1975 through 1978 and then declined fairly dramatically throughout the 1980s. This represents a large change in drug-using behavior, from a high of 37 percent of seniors reporting recent marijuana use in 1978, to a low of 12 percent in 1992. The decline then reversed itself, climbing back to 24 percent reporting recent use in 1997, and then slowly declining to just under 20 percent in 2004.

Marijuana is important because it is by far the most frequently used illicit drug, but the same study found a similar, if less dramatic,

pattern for trends in recent alcohol use and in recent use of illicit drugs other than marijuana: peak usage around 1980, followed by a decline to the lowest use in the early 1990s, and a small increase following that. We'd like to know what caused these changes, so let's start by looking at the attitude data. The line on the graph in Figure 1.1 labeled "risk" shows the percentage of students who agree with the statement that there is "great risk of harm in regular use of marijuana." This line is almost a mirror image of the line on the graph representing marijuana use. Students' perception of risk was at its lowest when use was at its highest in the late 1970s, and perception of risk reached a peak in the early 1990s when use was at its lowest. We'd like to be able to say that when more students are afraid to use marijuana this causes fewer of them to use it, and that's probably the correct way of looking at this. But we cannot rule out the possibility that the cause works the other way around: When more students are using marijuana and it is more familiar, fewer students are afraid of the risks.

The third line on the graph is also important. Notice that from 1975 through 2004, almost 90 percent of the 12th-graders said it would be fairly easy or very easy for them to get marijuana if they wanted it. In the context of the other two lines, it is surprising how stable this perception is over time. This line represents *perceived* availability—90 percent of the students believe they could get marijuana, but most of them haven't actually bought any. This graph seems to support the idea that if we want to reduce marijuana use among high school students, trying to make marijuana less available might not have much impact, whereas changing the students' attitudes about the risks of using marijuana might be more effective. In other words, the marijuana is always there, but the students will decide whether they are going to use it based on their attitudes.

In addition to the surveys of students, broad-based self-report information is also gathered through house-to-house surveys. With



Marijuana is the most commonly used illicit drug, and major surveys including the Monitoring the Future Project and the National Survey on Drug Use and Health track trends in its usage.

proper sampling techniques, these studies can estimate the drug use in most of the population, not just among students. This technique is much more time consuming and expensive, it has a greater rate of refusal to participate, and we must suspect that individuals engaged in illegal drug use would be reluctant to reveal that fact to a stranger on their doorstep. Table 1.2 presents data from the National Survey on Drug Use and Health (formerly called the National Household Survey) obtained from face-to-face, computer-assisted interviews done with more than 68,000 individuals in carefully sampled households across the United States. Because rates of use for most substances are highest in the 18–25 age group, we are presenting data for different demographic groups using only that age group (except for alcohol, where the grouping is all adults over 21). The table shows males typically are more likely to use these substances than females, and those with college degrees are less likely to use tobacco or marijuana than those with high school diplomas. Among the racial/ethnic comparisons, more whites report using these substances than blacks, Hispanics, or Asians.

Some of the results from the National Survey can be compared with similar household surveys conducted as far back as 1965; Figure 1.2 displays the trends in reported past

Table 1.2
Drug Use among 18 to 25-year-olds: Percentage Reporting Use in the Past 30 Days

Drug	Male	Female	White	African American	Hispanic	Native American	Asian	High School Graduate	College Graduate
Alcohol (Age 21+)	65	56	68	48	48	56	47	56	78
Tobacco (all types)	52	37	51	35	35	55	28	46	34
Marijuana	20	12	18	17	10	24	6	16	12
Cocaine	3	2	3	1	2	3	0.2	2	2

Source: Substance Abuse and Mental Health Services Administration. (2005). *Overview of Findings from the 2004 National Survey on Drug Use and Health* (Office of Applied Studies, NSDUH Series H-27, DHHS Publication No. SMA 05-4061). Rockville, MD.

month use of marijuana for two different age groups. This study shows the same pattern as the Monitoring the Future study of 12th-graders: Marijuana use apparently grew throughout the 1970s, reaching a peak in about 1980, and then declining until the early 1990s, when it increased again.

Figure 1.3 shows trends in the 30-day figures for the 18 to 25 age group for alcohol, marijuana, and cocaine since 1974. Again, we see that the peak of reported use of all these substances was in 1980.

Finding such a similar pattern in two different studies using different sampling

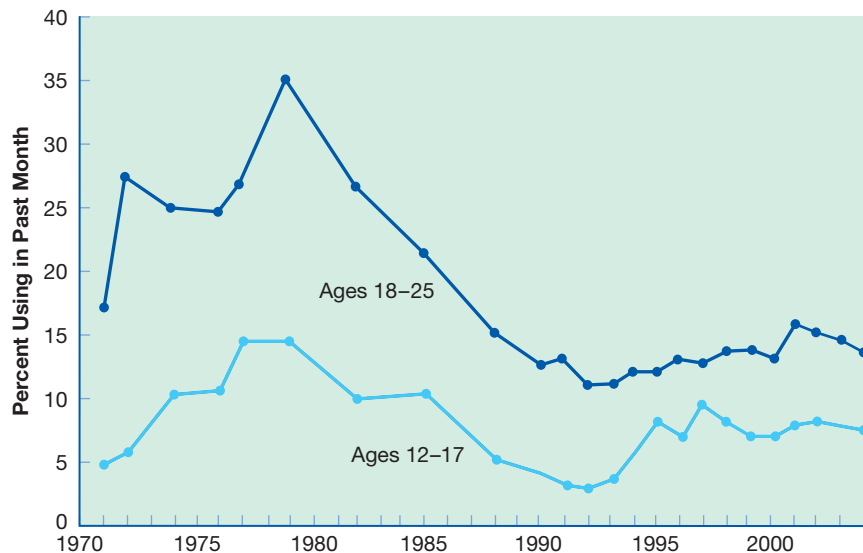


Figure 1.2 Marijuana Use among Persons Ages 12-25, by Age Group: 1971-2004

SOURCE: Substance Abuse and Mental Health Services Administration. (2005). *Overview of Findings from the 2004 National Survey on Drug Use and Health* (Office of Applied Studies, NSDUH Series H-27, DHHS Publication No. SMA 05-4061). Rockville, MD.

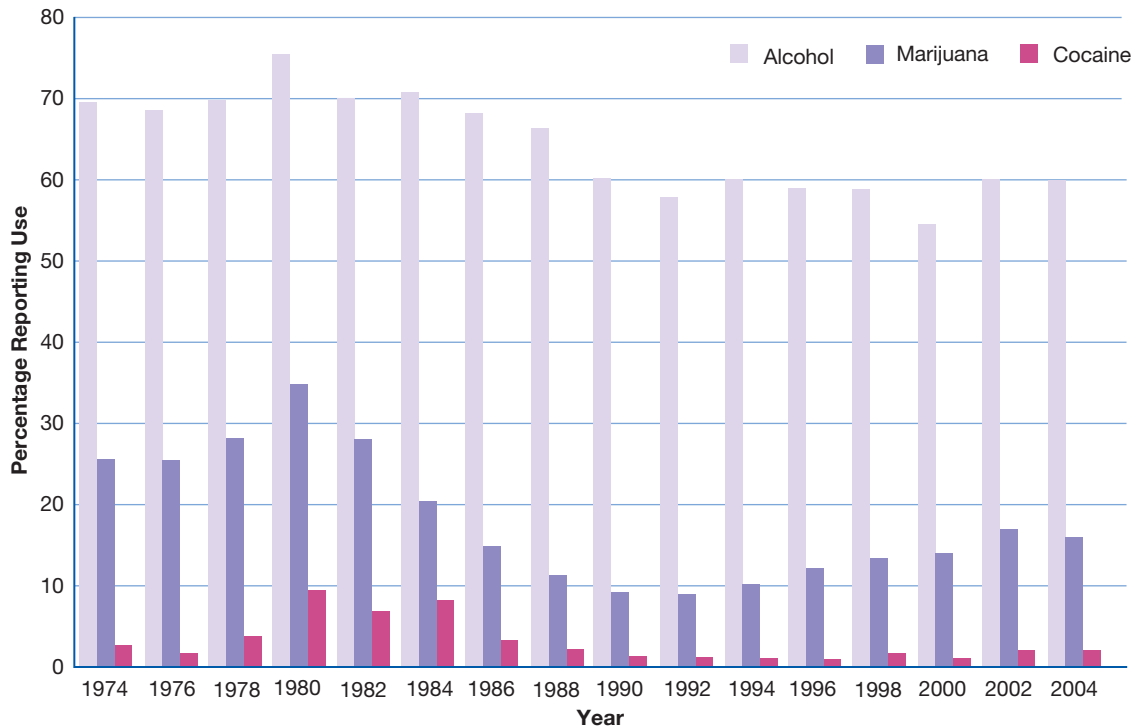


Figure 1.3 Trends in Reported Drug Use within the Past 30 Days for Young Adults Ages 18 to 25

SOURCE: Substance Abuse and Mental Health Services Administration. (2005). *Overview of Findings from the 2004 National Survey on Drug Use and Health* (Office of Applied Studies, NSDUH Series H-27, DHHS Publication No. SMA 05-4061). Rockville, MD.

techniques gives us additional confidence that these trends have been real and probably reflect broad changes in American society over this time. Political observers will be quick to note that Ronald Reagan was president during most of the 1980s, when use of marijuana and other drugs was declining, while Bill Clinton was in office during most of the 1990s, when these rates rose. Were these changes in drug use the result of more conservative drug-control policies under the Reagan administration and more liberal policies under the Clinton administration? There are two reasons to think that is not the answer. First, the timing is not quite right. President Reagan was elected in 1980, took office in 1981, and didn't begin focusing on the

“Just Say No” antidrug messages until 1983. Most of the important legislation was passed in 1986. All of this was after the downward trend in drug use had already begun. It seems more likely that the Reagan administration recognized the opportunity provided by an underlying change in attitude among the general public. The government's policies might have helped to amplify the effects of this underlying social change, but they did not create it. The same timing problem is associated with trying to link drug use to the Clinton presidency: The election was in 1992, and increased use was already beginning in 1993, during the first year of the Clinton administration. Also, the Clinton administration can hardly be accused of having liberal drug-

control policies—drug-control budgets and arrests for drug violations were both higher than in any previous administration. We don't have a good explanation for the generational differences in the use of illicit drugs, but the differences are obviously fairly large.

Correlates of Drug Use

Once we know that a drug is used by some percentage of a group of people, the next logical step is to ask about the characteristics of those who use the drug, as compared with those who don't. Often the same questionnaires that ask each person which drugs they have used also include several questions about the persons completing the questionnaires. The researchers might then send their computers "prospecting" through the data to see if certain personal characteristics can be correlated with drug use. But these studies rarely reveal much about either very unusual or very common types or amounts of drug use. For example, if we send a computer combing through the data from 1,000 questionnaires, looking for characteristics correlated with heroin use, only one or two people in that sample might report heroin use, and you can't correlate much based on one or two people. Likewise, it would be difficult to identify the distinguishing characteristics of the people who have "ever tried" alcohol, because that group usually represents more than 90 percent of the sample.

Much of the research on **correlates** of drug use has used marijuana smoking as an indicator, partly because marijuana use has been a matter of some concern and partly because enough people have tried it so that meaningful correlations can be done. Other studies focus on early drinking or early cigarette smoking. We have already seen that age, gender, racial/ethnic grouping, and education level are all related to rates of drug use.

You may be surprised at some of the factors that generally do *not* correlate well with alcohol or drug use. One of these is the *socioeconomic status (SES)* of the family.

Whether reporting on illicit drug use or level of drinking, most studies find little correlation to family income level. These results surprise people who think it's the kids with all the money who use drugs, as well as other people who believe that it's the poor kids who use drugs. In fact, those families living in poverty do have somewhat higher levels of illicit drug use. So very low SES does play a role in drug and alcohol use, but, for the vast majority of the population, SES is not a significant factor. Another surprise for most people is the consistent finding that *personality problems* are poor predictors of drug use. Even though many theories of drug use assume that people use alcohol or drugs because of low self-esteem, depression, or anxiety, many studies have found that measures of these characteristics are only weakly correlated with drug use. People often report that they drink or use drugs when they're depressed or anxious, but they are probably referring to a temporary *state* of depression or anxiety, as opposed to a long-term personality *trait*. Self-esteem apparently has complicated relationships to drug use because there is evidence that young people sometimes enhance their self-esteem by becoming involved with a drug- or alcohol-using group. Also, please remember that these surveys are examining the overall range of drug or alcohol use as found in the population at large, as opposed to looking selectively at that small fraction of people who have substance-use disorders.

Increasingly, researchers are analyzing the correlates of drug use in terms of *risk factors* and *protective factors*. Risk factors are those correlates that lead to an increased risk for drug use, while protective factors are those correlates that are associated with lower rates of drug use. A recent study, based on data obtained from the National Survey on Drug Use

correlate (core a let): a variable that is statistically related to some other variable, such as drug use.

Table 1.3
Risk and Protective Factors Associated with Adolescent Marijuana Use in the Past Year

Domain	Factors	Odds Ratio	Domain	Factors	Odds Ratio
COMMUNITY			PEER/INDIVIDUAL		
	Risk			Risk	
	Community norms toward substance use			Friends' substance use	
	Multiple substances	5.09		Multiple substances	8.05
	Marijuana (try once or twice)	4.14		Marijuana	6.25
	Availability of marijuana	2.72		Antisocial behavior	7.10
	Community attitudes toward substance use			Individual attitudes toward marijuana use	4.47
	Multiple substances	2.23		Friends' attitudes toward substance use	
	Marijuana (try once or twice)	1.95		Multiple substances	4.19
	Community disorganization and crime	1.43		Marijuana (try once or twice)	4.37
	Protective			Perceived risk of substance use	
	Exposed to prevention messages in media	0.70		Multiple substances	3.76
	Neighborhood cohesiveness	0.79		Marijuana	3.48
				Risk-taking proclivity	3.27
FAMILY				Protective	
	Risk			Religiosity	0.47
	Parental attitudes toward substance use			Participated in two or more extracurricular activities	0.52
	Multiple substances	2.84	SCHOOL		
	Marijuana (try once or twice)	2.47		Risk	
	Parental monitoring	2.60		Perceived prevalence of substance use	
	Protective			Multiple substances	6.05
	Parents are source of social support	0.40		Marijuana	4.78
	Parental encouragement	0.59		Low academic performance	1.81
	Parents communicate about substance use	0.97		Protective	
				Sanctions against substance use at school	
				Multiple substances	0.28
				Marijuana	0.52
				Commitment to school	0.45
				Exposed to prevention messages in school	0.63

continued

and Health, examined risk and protective factors regarding use of marijuana among adolescents (ages 12–17).³ This large-scale study provides some of the best information we have about the correlates of marijuana use among

American adolescents. As shown in Table 1.3, the factors were organized into several areas: community, family, peer/individual, and school. The most significant factors are reported in Table 1.3.

Table 1.3
continued

Notes:

The odds ratio indicates the increase or decrease in the odds of a respondent reporting past-year use of marijuana with higher scores on each scale. For example, people who report that they engaged in frequent fighting, stealing, or other antisocial behaviors during the past year were 7.10 times more likely to say they used marijuana than people who scored low on this “antisocial” scale. An odds ratio of 1.0 means there is no change in the odds of using marijuana with different scores on that scale. Risk factors have odds ratios higher than 1.0. Protective factors have odds ratios lower than 1.0. For example, those who report that their parents are a source of social support (they can talk to them about problems, etc.) are less than half as likely (0.40) to report marijuana use.

Community Norms Toward Substance Use is based on questions such as, “How many adults that you know personally would you say use marijuana or hashish?” (or other substances for the “multiple substances” scale).

Community Attitudes Toward Substance Use is based on questions such as, “How do you think that most adults in your neighborhood would feel about you trying marijuana or hashish once or twice?”

Community Disorganization and Crime is based on questions such as, “How much do you agree or disagree that there is a lot of crime in your neighborhood (street fights, graffiti, abandoned buildings)?”

Neighborhood Cohesiveness asks questions about how often people in your neighborhood help each other out and visit each other’s homes.

Parental Monitoring asks questions about how often parents check on your homework, limit TV watching, require chores, etc.

Parental Encouragement asks how often parents tell you they are proud of you, or let you know that you have done a good job.

Antisocial Behavior asks how often during the past year you have gotten into a serious fight, carried a gun, sold drugs, stolen, or attacked someone.

Risk-Taking Proclivity asks whether you get a kick out of doing dangerous things, and how often you wear a seat belt.

Religiosity asks about attendance at religious services and the importance of religious beliefs.

Low Academic Performance asks about your recent grade point average.

Commitment to School asks how much you like going to school, and whether the classes are important and interesting.

In some ways, the results confirm what most people probably assume: the kids who live in rough neighborhoods, whose parents don’t seem to care what they do, who have drug-using friends, who steal and get into fights, who aren’t involved in religious activities, and who don’t do well in school are the most likely to smoke marijuana. The same study analyzed cigarette smoking and alcohol use, with overall similar results. The study also reveals how strong each of these relationships is, and it also shows that some of the variables analyzed did not correlate with drug use. For example, Table 1.3 includes one non-significant factor for comparison purposes: Parents Communicate about Substance Use. This scale asked how often during the past year the adolescent had talked to at least one parent about the dangers of drug use. In Table 1.3, the odds ratio for this scale was very close to 1.0,

no correlation at all. How can this be? Don’t those TV commercials encourage parents to do this, and claim that parents are the “anti-drug”? This result points out the problem with a correlational study: Some adolescents smoked marijuana and also had a discussion with a parent about the dangers of drug use. In many cases, the parent might have had this conversation *because* the adolescent was caught or admitted using marijuana. In other cases, the parent might have had the conversation and prevented the adolescent from smoking marijuana. We might have two different causal relationships producing opposite effects on this scale, resulting in no overall correlation.

Another example of the limitation of correlational studies is the link between marijuana smoking and poor academic performance. Does smoking marijuana cause the user to get lower



Mind/Body Connection

Religion and Drug Use

More than three-fourths of American adolescents report that religion plays an important part in their lives. In study after study, those young people who report more involvement with religion (they attend services regularly and say their religion influences how they make decisions) are less likely to smoke cigarettes, drink alcohol, or use any type of illicit drug.

Consider your own feelings about religion and about drug use. Why do you think this relationship between “religiosity” and lower rates of drug use is such a consistent finding? If you have friends from different religious backgrounds, discuss this relationship with them. Some religions have specific teachings against any alcohol use or tobacco use, but the general relationship seems to hold even for those religions that do not forbid these behaviors (at least for adults). What other factors related to religious involvement in general might serve as protective factors against the use of these substances?

grades? Or is it the kids who are getting low grades anyway who are more likely to smoke marijuana? One indication comes from the analysis of risk and protective factors for cigarette smoking in this same study. The association between low academic performance and cigarette smoking was even stronger than the association between low academic performance and marijuana smoking. This leads most people to conclude that it’s the kids who are getting low grades anyway who are more likely to be cigarette smokers, and the same conclusion can probably be reached about marijuana smoking.

The overall picture that emerges from studies of risk and protective factors is that the same adolescents who are likely to smoke cigarettes, drink heavily, and smoke marijuana are also likely to engage in other deviant behaviors, such as vandalism, stealing, fighting, and early sexual

behavior—what some researchers refer to as *problem* behaviors. We all can think of individual exceptions to this rule, but correlational studies over many years all come to the same conclusion: If you want to find the greatest number of young people who use illicit drugs, look among the same people who are getting in trouble in other ways.

Antecedents of Drug Use

Finding characteristics that tend to be associated with drug use doesn’t help us understand causal relationships very well. For example, do adolescents first become involved with a deviant peer group and then use drugs, or do they first use drugs and then begin to hang around with others who do the same? Does drug use cause them to become poor students and to fight and steal? To answer such questions, we might interview the same individuals at different times and look for **antecedents**, characteristics that predict later initiation of drug use. One such study conducted in Finland found that future initiation of substance use or heavy alcohol use can be predicted by several of the same risk factors we have already discussed: aggressiveness, conduct problems, poor academic performance, “attachment to bad company,” and parent and community norms more supportive of drug use.⁴ Because these factors were measured *before* the increase in substance use, we are more likely to conclude that they may be *causing* substance use. But some other, unmeasured, variables might be causing both the antecedent risk factors and the subsequent substance use to emerge in these adolescents’ lives.

A few scientists have been able to follow the same group of people at annual intervals for several years in what is known as a **longitudinal study**. One such study has tracked more than 1,200 participants from a predominantly African-American community in Chicago from ages 6 through 32.⁵ Males who had shown a high “readiness to learn” in



Males who are aggressive in early elementary school are more likely to be drug users as adults.

first grade were less likely to be cocaine users as adults, but females with poor academic performance in first grade had lower rates of cocaine use than females with higher first-grade scores. Males who were either “shy” or “aggressive” in first grade were more likely to be adult drug users compared to the students who had been considered neither shy nor aggressive 26 years earlier. It is much more difficult to obtain this type of data, and it is somewhat surprising that any variables measured at age six could reliably predict adult drug use.

Gateway Substances One very important study from the 1970s pointed out a typical sequence of involvement with drugs.⁶ Most of the high school students in that group started their drug involvement with beer or wine. The second stage involved hard liquor, cigarettes, or both; the third stage was marijuana use; and only after going through those stages did they try

other illicit substances. Not everyone followed the same pattern, but only 1 percent of the students began their substance use with marijuana or another illicit drug. It is as though they first had to go through the **gateway** of using alcohol and, in many cases, cigarettes. The students who had not used beer or wine at the beginning of the study were much less likely to be marijuana smokers at the end of the study than the students who had used these substances. The cigarette smokers were about twice as likely as the nonsmokers to move on to smoking marijuana.

If the gateway theory can explain something about later drug use, then perhaps looking at those people who followed the traditional order of substance use (alcohol/cigarettes, followed by marijuana, followed by other illicit drugs) and comparing them to people who followed different orders of use might tell us something useful about the importance of particular orders of initiation. One recent study examined 375 homeless “street” youth, ages 13–21, in Seattle.⁷ They were asked at what age they first started using various substances, and then grouped into categories depending on whether they followed the traditional gateway order or some other order of initiation. The order of use did not predict current levels or types of drug use in this population, leading the study’s authors to conclude that knowing which substances people use first might not be very important in helping to prevent future escalation of drug use.

One possible interpretation of the gateway phenomenon is that young people are exposed to alcohol and tobacco and that these substances

antecedent (ant eh see dent): a variable that occurs before some event such as the initiation of drug use.

longitudinal study (lon jeh too di nul): a study done over a period of time (months or years).

gateway: one of the first drugs (e.g., alcohol or tobacco) used by a typical drug user.



Targeting Prevention

Preventing What?

Chapter 1 provides an overview of psychoactive drug use, primarily based on data from the United States. As we look forward to the topic of prevention, it's appropriate to think about what aspects of psychoactive drug use we would most like to reduce. Following are some perspectives:

- We should work to prevent any use of tobacco or alcohol by those under age 21, as well as any use of drugs such as marijuana, cocaine, and LSD. These drugs are all illegal, and we know that early use of tobacco and alcohol is associated with a greatly increased risk of illicit drug use in the future.
- Focusing only on drug use ignores the fact that illicit drug use is usually part of a larger pattern of deviant or antisocial behavior. Therefore, our efforts would be more effective if we were to target younger people and work to prevent poor

academic performance, fighting, shoplifting, and other early indicators of this lifestyle, in addition to early experimentation with tobacco and alcohol.

- Wait a minute! We're confusing what might be desirable with what might be possible. We can't prevent everyone from doing things we don't like. For example, as adults most people will drink alcohol at least once in a while, yet perhaps only 10 percent of drinkers have most of the problems. Trying to prevent all drug use and other undesirable behavior is just too big a job, and it violates our sense of individual freedom. We need to focus our efforts on preventing abuse and the crime that goes with it. That's a much smaller problem, and we have a better chance of success.

With which of these perspectives do you most agree at this point? Are there other perspectives not represented by these three?

somehow make the person more likely to go on to use other drugs. Because most people who use these gateway substances do not go on to become cocaine users, we should be cautious about jumping to that conclusion. More likely is that early alcohol use and cigarette smoking are common indicators of the general deviance-prone pattern of behavior that also includes an increased likelihood of smoking marijuana or trying cocaine.

Because beer and cigarettes are more widely available to a deviance-prone young person than marijuana or cocaine, it is logical that beer and cigarettes would most often be tried first. The socially conforming students are less likely to try even these relatively available substances until they are older, and they are less likely ever to try the illicit substances. Let's ask the question another way: If we developed a prevention program that stopped all young people from smoking cigarettes, would that cut down on marijuana smoking? Most of us think it might, because people who don't want to suck tobacco smoke into their lungs

probably won't want to inhale marijuana smoke either. Would such a program keep people from getting *D* averages or getting into other kinds of trouble? Probably not. In other words, we think of the use of gateway substances not as the *cause* of later illicit drug use but, instead, as an early indicator of the basic pattern of deviant behavior resulting from a variety of psychosocial risk factors.

Motives for Drug Use

To most of us, it doesn't seem necessary to find explanations for normative behavior; we don't often ask why someone takes a pain reliever when she has a headache. Our task is to try to explain the drug-taking behavior that frightens and infuriates—the deviant drug use. We should keep one fact about human conduct in mind throughout this book: Despite good, logical evidence telling us we “should” avoid certain things, we all do some of them anyway. We know that we shouldn't eat that second piece of pie or have that third drink on an empty

stomach. Cool-headed logic tells us so. We would be hard pressed to find good, sensible reasons why we should smoke cigarettes, drive faster than the speed limit, go skydiving, sleep late when we have work to do, flirt with someone and risk an established relationship, or use cocaine. Whether one labels these behaviors sinful or just stupid, they don't seem to be designed to maximize our health or longevity.

But humans do not live by logic alone; we are social animals who like to impress each other, and we are pleasure-seeking animals. These factors help explain why people do some of the things they shouldn't, including using drugs.

The research on correlates and antecedents points to a variety of personal and social variables that influence our drug taking, and many psychological and sociological theorists have proposed models for explaining illegal or excessive drug use. We have seen evidence for one common reason that some people begin to take certain illegal drugs: usually young, and somewhat more often male than female, they have chosen to identify with a deviant subculture. These groups frequently engage in a variety of behaviors not condoned by the larger society. Within that group, the use of a particular drug might not be deviant at all but might, in fact, be expected. Occasionally the use of a particular drug becomes such a fad among a large number of youth groups that it seems to be a nationwide problem. However, within any given community there will still be people of the same age who don't use the drug.

Rebellious behavior, especially among young people, serves important functions not only for the developing individual but also for the evolving society. Adolescents often try very hard to impress other people and may find it especially difficult to impress their parents. An adolescent who is unable to gain respect from people or who is frustrated in efforts to “go his or her own way” might engage in a particularly dangerous or disgusting behavior as a way of demanding that people be impressed or at least pay attention.



People who use drugs and who identify with a deviant subculture are more likely to engage in a variety of behaviors not condoned by society.

One source of excessive drug use may be found within the drugs themselves. Many of these drugs are capable of *reinforcing* the behavior that gets the drug into the system. **Reinforcement** means that, everything else being equal, each time you take the drug you increase slightly the probability that you will take it again. Thus, with many psychoactive drugs there is a constant tendency to increase the frequency or amount of use. Some drugs

reinforcement: a procedure in which a behavioral event is followed by a consequent event such that the behavior is then more likely to be repeated. The behavior of taking a drug may be reinforced by the effect of the drug.

(such as intravenous heroin or cocaine) appear to be so reinforcing that this process occurs relatively rapidly in a large percentage of those who use them. For other drugs, such as alcohol, the process seems to be slower. In many people, social factors, other reinforcers, or other activities prevent an increase. For some, however, the drug-taking behavior does increase and consumes an increasing share of their lives.

Most drug users are seeking an altered state of consciousness, a different perception of the world than is provided by normal, day-to-day activities. Many of the high school students in the nationwide surveys report that they take drugs “to see what it’s like,” or “to get high,” or “because of boredom.” In other words, they are looking for a change, for something new and different in their lives. This aspect of drug use was particularly clear during

the 1960s and 1970s, when LSD and other perception-altering drugs were popular. We don’t always recognize the altered states produced by other substances, but they do exist. A man drinking alcohol might have just a bit more of a perception that he’s a tough guy, that he’s influential, that he’s well liked. A cocaine user might get the seductive feeling that everything is great and that she’s doing a great job (even if she isn’t). Many drug-abuse prevention programs have focused on efforts to show young people how to feel good about themselves and how to look for excitement in their lives without using drugs.

Another thing seems clear: Although societal, community, and family factors (the outer areas of Figure 1.4) play an important role in determining whether an individual will first *try* a drug, with increasing use the individual’s own experiences with the drug become in-

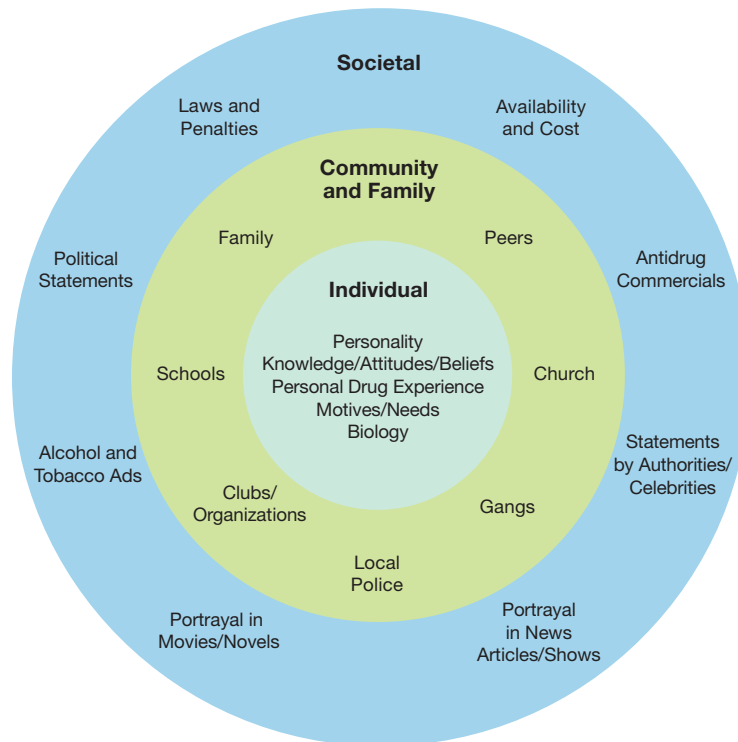


Figure 1.4 Influences on Drug Use

creasingly important. For those who become seriously dependent, the drug and its actions on that individual become central, and social influences, availability, cost, and penalties play a less important role in the continuation of drug use.

Summary

- In discussing a drug-use issue, you must consider who is using the drug, what drug is being used, when and where the drug use is occurring, why the person is using the drug, how the person is taking the drug, and how much drug is being used.
- No drug is either entirely good or bad, and every drug has multiple effects. The size and type of effect depends on the dose of the drug and the user's history and expectations.
- Deviant drug use includes those forms of drug use not considered either normal or acceptable by the society at large. Drug misuse is using a drug in a way that was not intended by its manufacturer. Drug abuse is drug use that causes problems. (If frequent and serious, then a diagnosis of substance abuse disorder is applied.) Drug dependence involves using the substance more often or in greater amounts than the user intended, and having difficulty stopping or cutting down on its use.
- The introduction of vaccines, antibiotics, psychotherapeutic drugs, and oral contraceptives has influenced our current views of drugs and drug use.
- Among American college students, about 70 percent can be considered current (within the past 30 days) users of alcohol, about 25 percent current smokers of tobacco cigarettes, about 20 percent current marijuana users, and less than 2 percent current users of cocaine.
- Both alcohol and illicit drug use reached an apparent peak around 1980, then decreased until the early 1990s, with a slower

increase after that. Current rates of use are lower than at the peak.

- Adolescents who use illicit drugs (mostly marijuana) are more likely to know adults who use drugs, less likely to believe that their parents would object to their drug use, less likely to see their parents as a source of social support, more likely to have friends who use drugs, less likely to be religious, and more likely to have academic problems. Neither personality nor socioeconomic status appears to be important in predicting drug use.
- A typical progression of drug use starts with cigarettes and alcohol, then marijuana, then other drugs such as amphetamines, cocaine, or heroin. However, there is no evidence that using one of the "gateway" substances causes one to escalate to more deviant forms of drug use.
- People may use illicit or dangerous drugs for a variety of reasons: They may be part of a deviant subculture, they may be signaling their rebellion, they may find the effects of the drugs to be reinforcing, or they may be seeking an altered state of consciousness. The specific types of drugs and the ways they are used will be influenced by the user's social and physical environment. If dependence develops, then these environmental factors may begin to have less influence.

Review Questions

1. Besides asking a person the question directly, what is one way a psychologist can try to determine why a person is taking a drug?
2. What two characteristics of a drug's effect might change when the dose is increased?
3. In what way might the development of oral contraceptives have changed people's views of drugs to make experimenting with psychoactive drugs more likely?

4. In about what year did drug use in the United States peak?
5. What are the two types of large drug-use surveys sponsored by the federal government on a regular basis?
6. About what percentage of college students use marijuana?
7. What is the relationship between socioeconomic status and illicit drug use or heavy drinking?
8. Name one risk factor and one protective factor related to the family/parents.

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Check Yourself

Do Your Goals and Behaviors Match?

One interesting thing about young people who get into trouble with drugs or other types of deviant behavior is that they often express fairly conventional long-term goals for themselves. In other words, they want or perhaps even expect to be successful in life, but then do things that interfere with that success. One way to look at this is that their long-term goals don't match up with their short-term behavior. Everyone does this sort of thing to some extent—you want to get a good grade on the first exam, but then someone talks you into going out instead of studying for the next one. Or perhaps you hope to lose five pounds but just can't pass up that extra slice of pizza.

Make yourself a chart that lists your long-term goals down one side and has a space for short-term behaviors down the other side, like the one that follows:

Write in your goal under each category as best you can. Then think about some things you do occasionally that tend to interfere with your achieving that goal and put a minus sign next to each of those behaviors. After you have gone through all the goals, write down some short-term behaviors that you could practice to assist you in achieving each goal, and put a plus sign beside each of those behaviors.

How does it stack up? Are there some important goals for which you have too many minuses and not enough pluses? If study skills and habits, relationship problems, or substance abuse appear to be serious roadblocks for your success, consider visiting a counselor or therapist to get help in overcoming them.

	Goals (Long-Term)	Behaviors (Short-Term)
Educational		
Physical health and fitness		
Occupational		
Spiritual		
Personal relationships		