

Chapter 1

Drug Use: An Overview

Chapter Objectives

After reading this chapter, students 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 among misuse, abuse, and dependence.
- Describe the concepts of dependence, tolerance, and withdrawal.
- Explain correlates and antecedents of adolescent drug use.
- Explain risk and protective factors for drug use.
- Discuss motives that people may have for illicit or dangerous drug-using behavior.

Chapter Vocabulary (in order of appearance in chapter)

Psychoactive: having effects on thoughts, emotions, or behaviour.

Marijuana: also spelled “marihuana.” Dried leaves of the *Cannabis* plant.

Harm reduction strategies: Measures taken to address drug problems that are open to outcomes other than abstinence or cessation of use

Correlates: a variable that is statistically related to some other variable, such as drug use.

Risk factors: variables correlated with higher rates of drug use

Protective factors: variables correlated with lower rates of drug use.

Antecedents: a variable that occurs before some event, such as the initiation of drug use.

Longitudinal study: a study done over time (months or years).

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

Reinforcement: a procedure in which a behavioural event is followed by a consequent event, such that the behaviour is then more likely to be repeated. The behaviour of taking a drug may be reinforced by the effect of the drug.

Chapter Outline and Associated Learning Issues

LO1, LO2, LO3, LO4

I. “The Drug Problem”

A. Talking About Drug Use

1. *Who* is taking the drug?
2. *What* drug is being taken?
3. *When* and *where* is the drug being taken?
4. *Why* is the drug being taken?
5. *How* is the drug being taken?
6. *How much* of the drug is being used?

- B. Four Principles of Psychoactive Drugs
1. Drugs, per se, are not good or bad.
 - a. *How* and *why* a drug is used is important.
 - b. Drugs do not possess magical powers, to produce evil.
 - c. Drugs are substances; behaviors and factors that lead to behaviors should also be a focus of concern.
 2. Every drug has multiple effects.
 - a. Psychoactive compounds that affect only one aspect of consciousnesses do not exist.
 - b. Drugs that act on the brain may also produce effects on other parts of the body.
 3. Both the size and the quality of a drug's effect depend on the amount the individual has taken.
 - a. An increased dose usually causes an increased effect.
 - b. For some substances different doses cause different kinds of effects.
 4. The effect of any psychoactive drug depends on the individual's history and expectations.
 - a. A person's attitude can effect their perception of a drug experience.

II. How Did We Get Here?

- A. Have Things Really Changed?
1. Humans have used psychoactive drugs for thousands of years for therapeutic and recreational purposes.
 2. Throughout history psychoactive drugs have played significant roles in society: treatment, religion, economics, law, government, language, and education.
 3. Today many psychoactive drugs, those deemed to be too dangerous or too likely to produce dependence, are either restricted or tightly regulated through the Controlled Drugs and Substances Act.
 4. Restriction and regulation of psychoactive drugs, both legal and illegal, has lead to enormous growth in illegal trade of such substances.
 5. The costs associated with the regulation of illegal psychoactive drug trade are a significant burden to society.
 6. Canada's approach to reducing the harms associated with alcohol and other drugs is outlined in Canada's Drugs and Substances Strategy which uses a broad four-component approach including: prevention, treatment, harm reduction, and enforcement.
 7. Harm reduction strategies normalize drug –taking behaviour and focus on the avoidance of problems.

III. Drugs and Drug Use Today

A. Extent of Drug Use

1. Current information on the prevalence and patterns of drug use comes from several sources, including surveys performed in: the general population, selected communities and, secondary and post-secondary institutions. Because of the limitations associated with such measurements accurate statistics are hard to attain.
 - a. Self-reports may include a biased sample and be inaccurate or dishonest.

B. Trends in Drug Use

1. The Canadian Alcohol and Drug Survey (CADS), previously called the Canadian Tobacco, Alcohol and Drug Survey (CTADS), follows nationwide trends in drug use among Canadians, 15 years of age and older, over time. Note that the CTADS replaced the prior CADUM.
2. Surveys like the Ontario Student Drug Use Health Survey (OSDUHS), the Canadian Campus Survey (CCS) and, the American College Health Association – National College Health Assessment (ACHA-NCHA) measure trends in drug use among Canadian youth.
3. Surveys like the CADS, ACHA-NCHA, CCS and, the OSDUHS have been created with four key objectives:
 - a. To determine prevalence, incidence, and patterns of drug use.
 - b. To measure personal and social harms associated with patterns of drug and alcohol use.
 - c. To identify risk and protective factors related to drug and alcohol use and the consequences of such use in specific subgroups and the general Canadian population.
 - d. To establish baseline data for use in the evaluation of treatment and prevention program effectiveness.
4. Drug use patterns seen across multiple surveys are more likely to be accurate.
5. Survey data have shown that patterns and rates of drug and alcohol use change with time.
 - a. The perceived availability of alcohol and other drugs does not appear to affect rates of use.
 - b. Correlations may exist between the perception of risk and the reported use of alcohol and other drugs.
6. Decreases or increases in drug use are not related to changes in government legislation, but are related changes in a broad range of attitudes and behaviours among Canadians – what we can refer to as *social trends*.

LO5, LO6, LO7

IV. Correlates of Drug Use

A. What Factors Are Considered?

1. Surveyors look for common characteristics in those who use drugs, in comparison with those who do not use drugs.
 2. Study limitations can make it difficult to determine the effects of some factors.
- B. Risk and Protective Factors
1. Risk factors are correlated with higher rates of drug use.
 2. Risk factors for drug use include having friends who use drugs, engaging in fighting or stealing, perceiving that substance use is prevalent at school, knowing adults who use drugs, and having a positive attitude towards drugs.
 3. The kids most likely to use marijuana frequently live in a rough neighborhood, have little parental monitoring, steal and get into fights, may not be involved in religious activities, and do poorly in school.
 4. Protective factors are correlated with lower rates of drug use.
 5. Protective factors for drug use include perceiving strong sanctions against drug use at school, having supportive parents, being committed to school, being involved in religious activities, and participating in two or more extracurricular activities.
 6. Overall, studies of risk and protective factors suggest that adolescents who are more likely to smoke cigarettes, drink heavily, and smoke marijuana are also more likely to engage in other deviant behaviors, such as stealing, fighting, and early sexual behaviors.
- C. Gender
1. Males are more likely to use alcohol and tobacco, smoke marijuana, and use other illicit drugs than are females.
- D. Level of Education
1. Those with more education (post-secondary degrees, compared with those who completed high school only) are much more likely to drink alcohol and somewhat less likely to use marijuana or other illicit drugs.
- E. Personality Variables
1. Evidence for correlations between traditional personality traits and drug use is somewhat weak and inconsistent.
 2. Several studies focus on “impulsivity” as correlating with rates of substance use.
 3. Personality factors may play a role in whether someone decides to try alcohol, heroin or marijuana, but they may play a large role in whether drug use develops into a serious problem.
- F. Genetics
1. Genetic studies are beginning to show clear association between genetic variances (alleles) and substance-related disorders.
- H. Antecedents of Drug Use
1. Antecedents such as aggressive behavior in children are characteristics that predict later initiation of drug use.
 2. Antecedents can be researched through longitudinal studies that track individuals over time.

3. Gateway substances are the drugs first used by a typical drug user.
 4. Use of gateway substances may best be thought of not as the cause of later drug use but as an early indicator of a basic pattern of deviant behavior resulting from a variety of psychosocial risk factors.
- I. Motives for Drug Use
1. Personal and social variables such as identifying with a deviant subculture increase the likelihood of drug use.
 2. Rebellious behavior can serve as a way to demand attention or to make a particular impression.
 3. Drug use may be reinforced by the effects of the drug.
 4. Drug users are often seeking an altered state of consciousness.
 5. Societal, community, and family factors play an important role in determining whether a person tries a drug, but the individual's experiences with a drug become more important with increasing use.

Key Statements

- Drug use includes taking an aspirin for a headache, taking a single dose of cough syrup for a cough, or taking a hit of acid.
- *Who* is using a drug and *which* drug they are using influence our perceptions about whether drug use is problematic.
- In discussing drug use, we often overlook simple but meaningful questions and we fail to define key terms, e.g., Is the use legal or illicit? Are we talking about use or abuse?
- *When* and *where* a drug is used may dictate if use is acceptable or not.
- *How* a drug is taken has an effect on how the body reacts.
- *How much* and *how often* are hinge points between “normal” use and use that is considered abuse.
- Four principles of psychoactive drug
 1. Drugs are not bad or good; they are substances. Behavior is an important consideration. By itself, a drug cannot do anything until it enters a body. Some drugs help the body function when taken correctly but can cause harm when misused or abused.
 2. Every drug has multiple effects. No part of the body works independently from the rest; all systems are connected. When a drug is taken it affects all parts of the body.
 3. The higher the quality of a drug, or the larger the dose of a drug, the larger the response or the more severe the response.
 4. The effects of a drug depend on the person—not only personality, but age, race, weight, and gender all influence how the body takes in and responds to the drug.
- History tells us that as long as humans have been around, some have used, misused, and abused some plants or substances.
- If the perception of risk of drug use is low, then rates of use are higher, and vice versa.
- Perception of risk differs from perception of availability.
- Survey questionnaires, while reaching many people, have disadvantages.
- Longitudinal studies are one way we have looked for antecedents of drug use.

- There is ample evidence that many behaviors, such as eating too much, driving too fast, or drinking too much, are dangerous, but people do these things anyway.
- Fads and cultural trends influence which drugs are being used.

Chapter Discussion Questions and Activities

What do you feel is meant by “drug use on the rise”?

There are many films through the years that have featured drug use: *Scarface*, *Superbad*, *Requiem for a Dream*, *Trailer Park Boys*, *The Wolf of Wall Street*, *Trainspotting*, and *Blow*, for example. How do they differ in terms of their presentation of drug use? What about the use of cigarettes, cannabis, illicit drugs and, alcohol in movies where they are not the main storyline, such as in Sherlock Holmes stories, *The Exorcist*, *Sideways*, or *The Princess Bride*?

Using Figure 1.6, ask students to rank the most important influences on their substance use and then put them into groups according to how they ranked the influences. Have the groups debate their views on key influences on substance use.

Ask your students to perform a systematic literature search and create a current evidence-based list of risk and protective factors associated with substance use in youth.

Discuss the four principles of psychoactive drugs in class. What are some examples of each? Ask students to come up with examples using both illicit and over-the-counter drugs.

What factors make it difficult to determine the extent of drug use? What information might be missing in surveys? What is self-report bias and how might it influence the validity of data we collect. Why might people not be honest? What can be done to improve accuracy of information about drug use?

Why might some seemingly causal relationships between drug use factors be misleading? How do problem behaviors affect drug use?

What can self-report survey like the CADS (formerly the CTADS), ACHA-NCHA and the OSDUHS tell us about trends in marijuana, prescription opioid and alcohol use?

Canada currently relies primarily on the American College Health Association – National College Health Assessment (ACHA-NCHA) to survey post-secondary student drug use. Ask your students to consider the rationale for employing this US survey. Then have them compare the data collected through the ACHA-NCHA with that of more recently developed Canadian surveys.

Videos that Support/Expand Chapter Content

1) Dr. Nora Volkow, 2017, Mental Illness and Drug Addictions: Common Developmental Risks and Brain Pathways.

Nora Volkow, the Director of the National Institute on Drug Abuse (NIDA) in the United States, joined AMI-Quebec to speak on Mental Illness & Drug Addiction: Common Developmental Risks & Brain Pathways. Talk at Concordia University.

Available at: <https://www.youtube.com/watch?v=GLCTy9e8aik>

2) Dr. Nora Volkow, TEDMEDS 2014. Why do our brains get addicted?

Available at: <https://www.tedmed.com/talks/show?id=309096>

3) Dr. Nora Volkow, Inside the Addicted Human Brain. USA Science and Education Festival. Available at:

<https://www.youtube.com/watch?v=F-sfiQZqG24>

4) Dr. Howard Liddle, Risk and Protective Factors

Available at: <http://www.youtube.com/watch?v=7MnalNpbQrg>

5) Khan Academy 2016, Risk factors for drug use and drug abuse

Available at: <https://www.youtube.com/watch?v=R23KUZvjg4A>

6) Dr. Gabor Maté, TEDx Talks 2012. The Power of Addiction and The Addiction of Power.

Available at: <https://www.youtube.com/watch?v=66cYcSak6nE>

7) National Institutes of Drug Abuse, 2015. Dr. Nora Volkow on Addiction: A Disease of Free Will

Available at: <https://www.youtube.com/watch?v=X1AEvkWxbLE>

8) Hank Green 2012, Chemistry of Addiction

Available at: <https://www.youtube.com/watch?v=ukFjH9odsXw>