

2

Causes of the Abuse of Illicit Drugs

Abstract This chapter analyzes the causes of the abuse of drugs and explores the pathways from initiation to the abuse of psychoactive drugs to chronic and acute diseases. The detrimental consequences of the use of various drugs to health are also explained. Even though many abusers of drugs have begun as casual users, a significant number eventually become addicted. Various factors which may make individuals vulnerable to the abuse of drugs are explored. The vulnerability to drug abuse is to a large extent determined by personal characteristics and the social environment; for example, an individual's impulsivity leads to a preference for short-term over-delayed gratification and also shows an inability to persevere with a given task.

Keywords Behavioral disease · Drug abuse and diseases · Initiation into drug abuse · Pathways · Personal characteristics · Psychotropic drugs · Vulnerability to drug use

2.1 Introduction

The initiation into the use of psychoactive drugs usually occurs during early adolescence and then may develop into an acquired learned behavior. All abusers of drugs have begun as casual users, but a significant number become eventually addicted to the drugs. The initial use of soft drugs may be used as a stepping-stone to harder drugs.

The detrimental consequences of the use of cannabis to health are explained, and the different stages through which the use of drugs proceeds have been described. The vulnerability to drug abuse is to a large extent determined by personal characteristics and the social environment; for example, an individual's impulsivity leads to a preference for short-term over-delayed gratification and also shows an inability to persevere with a given task.

The pathways from initiation to chronic and acute diseases are also described. The continuous consumption eventually leads to physical and psychological addiction and will experience withdrawal symptoms when they try to discontinue using the drug.

2.2 The Initiation of Drug Abuse

Adolescents' decisions to use psychoactive drugs are influenced to a large extent by their environment, including their peers (Ennett et al. 1994; Lundborg 2006 ; Urberg 1992). Peer group pressure and the need to seek approval lead individuals to conform. The use of such substances then affects users' learned behaviors and motivation (McLellan et al. 2000). Thus, Bandura (1973) described a learning theory whereby individuals conform to behavior which is assumed to give them high status among peers.

Becker (1996) argued similarly in economic terms by stating that individuals gain utility by consuming goods and services, and from social capital in the form of social prestige and status. Thus, individuals generally are expected to conform to the average person within a given reference group to gain utility (Akerlof 1997). Balsa et al. (2010)

found that for students in Grades 7–12 in the USA, adolescents who had a drinking frequency below the average, but were approaching the drinking level of their classmates, had a higher level of popularity. Males had higher popularity if they kept up with their classmates' drinking frequency. In the case of females, initiating into the behavior of drinking alcohol was of greater importance than conformity to their peers' drinking patterns. Thus, these findings confirm the theory that adolescents find it socially rewarding if they conform to their peers' drinking pattern of alcohol. Conformist behavior leads to social reinforcement and thereby makes future conformist behavior inevitable as it reinforces itself. Hence, harmful social behavior is being reinforced by norms within individuals' own subcultures. The addiction to presently illicit drugs, alcohol, or nicotine in most cases occurs early during adolescents, generally between the age of 13 and 18.

Bandura (1986) argued that the main reasons why adolescents start to use alcohol are social and cultural factors; they learn by watching others and imitate what they perceive to be culturally appropriate behavior, to be part of the "crowd." Individuals may increase their use of alcohol by processes of operant conditioning whereby users of alcohol continue their use because of the reinforcement which they may experience from the drug, which may be positive or negative. They experience positive reinforcement when they like the taste or find it as a "social lubricator" in social gatherings.

Drugs have reinforcing effects; for example, when people initially start using drugs and they find the experience enjoyable, then they are likely to continue using the drug. On the other hand, they may experience negative reinforcement when they use alcohol to reduce stress; generally, the higher the stress they experience, the more alcohol they consume (Wills 1986). Drug users begin using drugs mostly for the same reasons why they smoke or drink alcohol. The use of drugs usually begins with a pursuit of euphoric experience, whereas the dependent use of drugs is mainly driven by a need to avoid withdrawal symptoms.

Casual users of illicit drugs consume a large proportion of the total drug supply and a not insignificant number become eventually addicted to the drugs, all of them having started off as casual users. Drug users'

status of their addiction may change through their death, through their independent decision to discontinue the use of drugs, or through policies aimed at reducing the abuse of illicit drugs.

Users of drugs may use some drugs as a stepping-stone onto harder drugs, so that there may be a gateway effect. The use of a gateway drug is a precursor to the subsequent use of other drugs. Hence, the use of soft drugs may lead to a gateway toward harder drugs and may also be consumed together with other drugs; for example, alcoholic beverages and marijuana have similar intoxicating properties so that they may serve as substitutes (see Pacula 1998). When marijuana and some other drugs previously illicit have been legalized, its consumption could be controlled through price policies, taxation, and other policies as is being done in the case of alcoholic beverages and cigarettes.

Kandel (2002) argued that the main danger from the use of marijuana comes from its indirect consequences; that is, it is leading toward a gateway or stepping-stone effect. Once users of marijuana have begun to use marijuana, there is a possibility to go on to use harder drugs which have more detrimental effects on private and social costs. However, the user of harder drugs may also have begun to use harder drugs without first using marijuana; other factors such as psychosocial personal relationships or economic factors and psychosocial personal characteristics, such as the ability to exercise self-control and the ability to postpone short-term gratification, may also increase the propensity of using hard drugs.

Cameron and Williams (2001) found that marijuana is being used as a substitute for alcohol (see also Williams et al. 2004), whereas tobacco is often used as a complement to marijuana. Hence, an increase in the price of tobacco is likely to reduce the consumption of tobacco and the demand for marijuana also declines as it is a complement to tobacco. Alcohol and illicit drug abuse and its social and private costs are understated and untreated and are often presented as problems derived from other causes. The restriction of supply when demand is inelastic may cause unintended private and social costs. There are potentially considerable adverse effects resulting from punitive supply-oriented policies as they increase the costs of health as well as the social costs of crime.

Yu and Williford (1992) found that among 16- to 24-year-olds in the State of New York, alcohol and cigarettes were precursors to the use of cannabis. Evidence has also been found for a reverse gateway; for example, Humfleet and Haas (2004) also found some evidence of a reverse gateway and made the point that reverse gateways may be the consequence of an increasing ease of access to cannabis to minors as compared to their access to cigarettes. The complementarity between the smoking of cigarettes and cannabis implies that an increase in the prices of cigarettes led to a decline in demand for cigarettes as well as the use of marijuana decreased as well.

The use of drugs progresses through different stages (see Kandel 2002). Some potential users of drugs may be initiated to the use of drugs but only use them casually, and some may begin with cannabis but may progress toward other illicit drugs. Users of illicit drugs may be initiated into the use of drugs at an early age and may progress from casual user to a frequent user and may enter the stage of drug dependence. Drug users may begin with “soft” drugs which may then function as stepping-stones toward “harder” drugs. However, it has been argued that personal characteristics of drug users and their social environment are what makes potential drug users most vulnerable; for example, a drug user’s impulsivity increases the chance of taking drugs.

In the Netherlands, youngsters may start to use cannabis between the years of 15 and 25 years but are unlikely to start using cannabis after the age of 25; only about 20 % use cannabis after one year, and the median duration of use is about 10 years. Van Ours and Williams (2005) found that in Australia a lower price will lead to an earlier initiation into the use of cannabis but the lower price has no effect on the duration of the use of cannabis.

Initiation into the use of cannabis occurs relatively early; that is, there is generally a rapid increase from the early teens to a peak during the mid- to late teens (Pudney 2010, p. 169). Pudney (2010) also suggested that “there is a strong cohort effect” (p. 169) as few people started to use cannabis over the age of 25 in, for example, England and Wales. Early initiation is also closely associated with the length and intensity of the use of cannabis during later years (Pudney 2004). However, the study by Van Ours (2006) also showed that the earlier the

onset of a particular drug, the less likely it is that they will discontinue the use.

Kessler et al. (2005) found that drug abuse disorders have a narrow age-of-onset range, with an interquartile range between 17 and 23 years. Hence, policies to reduce drug abuse may be addressed more beneficially at the young age group. The probability to abuse drugs declines considerably after adolescence. Individuals who have not developed the disorder of drug abuse during their twenties are less likely to develop such a disorder later during their life.

2.3 Personal Characteristics and the Vulnerability to Drug Abuse

Numerous personal characteristics, and adverse family relations and adverse social environments will make individuals more vulnerable to the use of drugs; the more adverse such conditions the greater the likelihood that drug users move on to becoming drug abusers. On the other hand, improved socioeconomic environments and higher attainment in education may prevent children to take up the use of drugs. The greater the conflict within the family the greater may be the probability to move toward drug abuse. Traumatic experiences during early childhood or child abuse also increases the risk of later substance and alcohol abuse (see De Bellis 2002).

However, personal characteristics may be the most important contributing factors why individuals take up the use of drugs. Perry and Carroll (2008) explained well how impulsivity enhances individuals' vulnerability to drug abuse. They found that impulsivity is an important factor in several key transition phases of drug abuse. There is also a reciprocal reinforcing relationship between impulsivity and psychosocial environmental conditions which may increase an individual's impulsivity and so may increase the probability of drug abuse. Impulsivity is associated with all behavioral diseases resulting from addictive behavior, may that be smoking, alcohol abuse, overeating, or gambling.

Impulsivity shows a preference for short-term preferable immediate, over delayed gratification, which is a central feature of alcoholism and drug abuse, but is also important in the case of other behavioral diseases, such as smoking, gambling, and overeating. Impulsivity also shows an inability to discontinue with a specific behavior even when the negative consequences of such behavior are well known or manifest themselves.

Individuals with impulsivity also generally have an inability to persevere with a given task, so that their concentration span is generally short and are reluctant to engage in tasks which stretch over a longer period, such as being in long-term education, even though the benefits may be considerable in the long run. Behavioral diseases are also the consequences of excessive indulgence in sensual pleasure. Drug abuse is often the consequence of opting for a short-term reward, such as a euphoric experience with little or no concern about detrimental long-term consequences, such as on health, and on educational or career-wise endeavors. As the level of impulsivity increases, it is likely that the level of drug abuse also increases. Krishnan-Sarin et al. (2007) found that impulsive individuals were less likely to achieve abstinence from smoking in a 4-week treatment program compared to adolescents that were less impulsive.

2.4 The Pathways from Initiation to Chronic and Acute Diseases

As the consumption of illicit drugs or any other drugs becomes perpetual, it becomes a habitual social activity and eventually the abuser of drugs becomes dependent on this substance. The user then develops various cognitive and physical impairments which then lead to various preventable diseases. Severe substance-use disorders may be seen as chronic conditions in much the same way as diabetes or asthma which may require changes in lifestyle (see Goodwin and Sias 2014). Substance-use disorder affects 15.9 % of the US population

at the age of 12 and above. Another 31.7 % engage in risky behavior which endangers their health and their safety (Goodwin and Sias 2014; p. 42).

Goodwin and Sias (2014) made the point that even though there is a genetic predisposition for substance-use disorder, “it takes environmental factors to facilitate its expression into an illness/disability” (p. 43). The initiation into drug use is mostly voluntary although peer group pressure also plays a considerable role. Whether entirely voluntary or not, the use of drugs all too often evolves into a pattern of behavior which becomes ingrained as an irresistible force.

Addiction results from the continuous consumption of a synthetic or natural substance whereby the user becomes physically and psychologically dependent. Physical dependence occurs when the body has adjusted to the constant presence of the drug. Over time, the body requires larger and larger doses of the drug to achieve the same effect as the level of tolerance has increased. Users of drugs will experience withdrawal symptoms when they discontinue using the drug. Psychological dependence occurs when people feel a compulsion to use a particular substance but do not have to be physically dependent. However, psychological dependence may develop into physical dependence as the body acquires a tolerance toward the drug. Rosenhan and Seligman (1984, p. 402) classified substance abuse according to three criteria: (1) a pattern of pathological use; (2) there is an impairment of social or occupational functioning because of the use of the substance; and (3) at least one month’s duration of the disturbance. The second criterion only applies to the abuse of alcohol and illicit drugs but not to the abuse of tobacco. Sarafino (1990) added to the second criterion “heightened risk factors for disease,” so that the use of tobacco in this case “on a regular basis would qualify as abuse” (p. 217).

Illicit drugs as well as legal drugs are toxic substances, although the physical and psychological effects of the toxic substances differ between the different drugs. With the habitual and chronic use of such drugs, the users develop a dependence on those drugs. The pathological use of drugs falls into two categories: substance abuse and substance dependence. A drug addiction is defined as a compulsive use of a drug which is out of control, even though the abuser of the drug is aware of the

detrimental consequences of taking the drug. Substance dependence has been redefined as a drug addiction, even when there is no indication of any withdrawal syndrome. Substance abuse and substance dependence are described as substance-use disorders.

According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, American Psychiatric Association (2013), the abuse has to be of at least one-month duration before it can be considered a disturbance. Substance dependence or addiction shows features of physical dependence on a particular drug. As the body becomes accustomed to the drug and builds up a tolerance, a greater and greater dosage is required to achieve a similar effect of intoxication. The user of drugs experiences withdrawal symptoms when suddenly the use of the drug decreases or stops. On the other hand, there is psychological dependence on some drugs which do not produce a physiological dependence or addiction.

Evidence of intoxication through either alcohol or other drugs may cast doubt on the *mens rea* rather than *actus reus*. A fundamental principle of the common law is that the defendant acted voluntarily and intentionally committed the act before criminal responsibility can be attributed; hence in the case of addiction to illicit drugs, it could be argued that drug abuse may not constitute a voluntary act; most criminal laws in Western countries require *mens rea and actus reus*, that is, a guilty mind and a guilty act. A guilty mind may include recklessness, intervention, dishonesty, or malice; without any such criteria being met, there cannot be any absolute liability. *Actus reus* is a guilty act which has to be a voluntary action or omission which constitutes a crime. An *actus reus* can be a positive act or can be a failure to act.

According to Western Criminal Law, individuals have an absolute liability, that is, a legal responsibility for an offense that does not need any proof of any *mens rea*, provided the act has been committed voluntarily. Under the legal concept "*actus non facit reum, nisi mens sit rea*," an act by itself does not constitute guilt unless done with a guilty intent. The intent and the act must both concur to constitute a crime. If drug addiction implies that the abuser of drugs is characterized by involuntariness, then drug abusers are not culpable and thus cannot be guilty of a crime. However, no legal system of any country accepts this legal

concept in the case of drug abusers, although it is recognized in Western law in other criminal proceedings.

The degree of addiction can be considered during the sentencing stage (Waller and Williams 1993, p. 878). However, a person addicted will gain little benefits of his/her state of dependence when the main charge is dealing or trafficking in heroin, even though the trafficking has been done in support of his/her addiction.

The consumption of alcohol is legal in almost every situation, but if the consumer of alcohol commits a crime under the influence of alcohol, that person may still be held responsible, but mitigating circumstances may apply. Much the same could be said in the case of addiction as a result of the abuse of illicit drugs.

References

- Akerlof, G. A. (1997). Social distance and social decisions. *Econometrica*, 65, 1005–10027.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5)*. Washington, DC: American Psychiatric Pub.
- Balsa, A. I., Homer, J. F., et al. (2010). Alcohol use and popularity: Social pay-offs from conforming to peers' behaviour. *Journal of Research on Adolescence*, 21(3), 559–568.
- Bandura, A. (1973). *A social learning analysis*. Englewood Cliffs, NY: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs: Prentice-Hall.
- Becker, G. S. (1996). *Accounting for tastes*. Cambridge, MA: Harvard University Press.
- Cameron, L., & Williams, J. (2001). Cannabis alcohol and cigarettes: Substitutes or complements. *Economic Record*, 77(236), 19–34.
- De Bellis, M. D. (2002). Developmental traumatology: A contributory mechanism for alcohol and substance use disorders. *Psychoneuroendocrinol*, 27, 155–170.
- Ennett, S. T., Rosenbaum, D. P., et al. (1994). Long-term evaluation of drug abuse resistance education. *Addictive Behaviors*, 19(2), 113–125.
- Goodwin, L. R., & Sias, S. M. (2014). Severe substance use disorder viewed as a chronic condition and disability. *Journal of Rehabilitation*, 80(4), 42–49.

- Humfleet, G. L., & Haas, A. L. (2004). Is marijuana use becoming a gateway to nicotine dependence? *Addiction*, 99(1), 5–6.
- Kandel, D. B. (2002). *Stages and pathways of drug involvement: Examining the gateway hypothesis*. New York: Cambridge University Press.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national co-morbidity survey replication. *Archives of General Psychiatry*, 62(6), 593–602.
- Krishnan-Sarin, S., Reynolds, B., Duhig, A. M., et al. (2007). Behavioral impulsivity predicts treatment outcome in smoking cessation program for adolescent smokers. *Drug Alcohol Dependence*, 88, 79–82.
- Lundborg, P. (2006). Having the wrong friends? Peer effects in adolescent substance use. *Journal of Health Economics*, 25(2), 214–233.
- McLellan, A. T., Lewis, D. C., et al. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *Journal of the American Medical Association*, 284(13), 1689–1695.
- Pacula, R. L. (1998). Adolescent alcohol and marijuana consumption: Is there really a gateway effect? National Bureau of Economic Research. *Working Paper No. 6348*. Cambridge, MA: Natural Bureau of Economic Research.
- Perry, J. L., & Carroll, M. E. (2008). The role of impulsive behaviour in drug abuse. *Psychopharmacology (Berl)*, 200, 1–26.
- Pudney, S. E. (2004). Keeping off the grass? An econometric model of cannabis consumption in Britain. *Journal of Applied Econometrics*, 19, 435–453.
- Pudney, S. (2010, January). Drugs policy: What should we do about cannabis? *Economic Policy*, Institute for Social and Economic Research, University of Essex.
- Rosenhan, D. L., & Seligman, M. E. P. (1984). *Abnormal Psychology*. New York: Norton and Co.
- Sarafino, E. P. (1990). *Health psychology: Biopsychosocial interactions*. New York: Wiley.
- Urberg, K. A. (1992). Locus of peer influence: Social crowd and best friend. *Journal of Adolescence*, 21, 439–450.
- Van Ours, J. C. (2006). Dynamics in the use of drugs. *Health Economics*, 15(12), 1283–1294.
- Van Ours, J. C., & Williams, J. (2005). Cannabis prices and dynamics of cannabis use. *Journal of Health Economics*, 26(3), 578–596.
- Waller, L., & Williams, C. R. (1993). *Criminal law: Text and cases* (7th ed.). Melbourne: Butterworths.

- Williams, J., Pacula, R. L., et al. (2004). Alcohol and marijuana use among college students: Economic complements or substitutes? *Health Economics*, 13(9), 825–843.
- Wills, T. A. (1986). Stress and coping in early adolescence: Relationships to substance use in urban school samples. *Health Psychology*, 5(6), 503–529.
- Yu, J., & Williford, W. R. (1992). The age of alcohol onset and alcohol cigarette, and marijuana use patterns: An analysis of drug use progression of young adults in New York State. *International Journal of Addiction*, 27(11), 1313–1323.

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