

Appendix C: Perspectives on Defining Substance Abuse

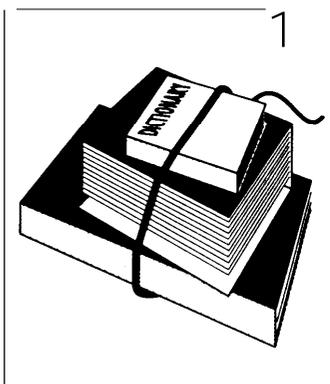
Four broad arenas that encounter substance abuse-related issues include, mass communications, criminal justice, medicine, and public health. These entities often operate independently of one another and use substantially different terms when describing the use of illicit substances or the illegal use of licit substances.

MASS COMMUNICATIONS

The traditional realm of mass communications includes television, radio, and popular journals and newspapers. Within these media, the term substance abuse has become a catch-all phrase, with no clear boundaries. Much of the general public has become familiar with the term substance abuse within this ambiguous context.

CRIMINAL JUSTICE

While it is well-known that many crimes are committed by persons with substance use disorders and that these disorders can be major contributors to their crimes, there is no systematic policy within the criminal justice system for the evaluation of these disorders. In many jurisdictions, whether federal, state, or local, the prevailing sentiment is that *any use* of an illicit substance and/or use of a licit substance in an illegal manner, is considered criminal abuse. A limited set of quantitative analyses including blood, urine, and breath tests can be performed to detect illegal levels of alcohol and/or the presence of illicit substances. The Blood Alcohol Concentration (BAC) is 0.10 grams/deciliter for all States excluding Oregon, California, Utah, Vermont, and Maine, where the level is 0.08 grams/deciliter. As of December 1992, 15 states had lower BAC levels for youthful offenders charged with driv-



ing while intoxicated. These levels range from 0.00-0.02 grams/deciliter, which is considered “zero tolerance,” up to 0.04 grams/deciliter (6). The alcohol breath test, while a different procedure from the BAC, converts the results into BAC units. Thus, the levels of intoxication for BAC and breath test are identical.

However, there are limitations to these analyses. In some jurisdictions, these tests can be performed only with the written consent of the person. In others, the urine test measures the presence of only one or two drugs rather than looking for the entire range of abusable substances.

Besides the limited amount of testing and evaluation, there is little use of psychological screening examinations or structured interviews to determine the level and severity of use, abuse, or dependence.

PUBLIC HEALTH

The traditional public health model incorporates the host-agent-environment relationship. Each of these factors has an individual, as well as an inter-related role in the potential use and/or harmful use of a substance.

Host factors may include possible genetic, psychological, and biological susceptibility. Agent factors incorporate the substance’s abuse liability capacity, as well as how the substance is marketed. Last] y, environmental factors encompass not only the availability of the substance, but the social, cultural, political, and economic climate as well (3,4).

Over the past 20 years, professionals within the field of public health have attempted to reemphasize the strict medical concept of substance abuse. Attention had previously focused almost exclusively on individual drug use patterns, rather than featuring the diverse problems of drug, alcohol, and tobacco use as being intimately tied into communities and society as a whole.

Even the term “substance abuse” has come under scrutiny. While the word “substance” may at first appear quite generic, in many fields, this term has come to incorrectly infer illicit drug use—reinforcing the misperception of many individuals

that alcohol and tobacco are not drugs. “Abuse” generally denotes the more severe forms of addiction. In reality, there is a continuum that begins with initial drug use and may progress to harmful use and addiction, with various problems present along the spectrum. In lieu of the term “*abuse,” public health professionals prefer terms such as “alcohol and drug problems” or the ● *harmful/hazardous use” of a drug.

The focus of the public health perspective is to understand the importance social norms, environment, and availability play in the shaping of alcohol- and drug-related problems both on an individual and societal level.

MEDICAL

Within the fields of medicine, the two most frequently cited texts for the definitions of substance abuse and dependence are the *Diagnostic and Statistical Manual Of Mental Disorders (DSM)* issued by the American Psychiatric Association and the *International Classification Of Diseases (ICD)* published by the World Health Organization (WHO). Each successive version of the DSM and ICD has been given a number signifying its order in the overall sequence of manuals; DSM uses Roman numerals and ICD uses ordinary numbers. The newest version of ICD, ICD-10, was published in 1992. The current version of DSM is the Third Edition-Revised (DSM-III-R), which will shortly be superseded by DSM-IV.

■ ICD

While the current ICD and DSM definitions of substance dependence are nearly identical, the two manuals differ sharply on the concepts of abuse, which ICD classifies as harmful use.

The ICD manual is intended to be used on an international basis, and the socially defined “American” criteria present in the DSM manual for substance abuse cannot be adequately transferred to a wide range of cultures. The current ICD-10 category of harmful use, while applicable cross-culturally, is limited to: “A pattern of psychoactive substance use that is causing damage to health. The damage may be physical (as in cases

of hepatitis from the self-administration of injected drugs) or mental (e.g., episodes of depressive disorder secondary to heavy consumption of alcohol).”

■ DSM

In the early 1950s the first DSM manual grouped alcohol and drug use disorders under the broad category of “*Sociopathic Personality Disturbances.” At that time, a substance use disorder was considered a moral weakness or the manifestation of a “deeper” psychological problem, rather than a disorder in-and-of itself with social, psychological, and perhaps even genetic determinants.

Throughout the 1970s and 1980s clinical research identified the need for separate categories for substance use disorders. The DSM-III manual, in 1980, was the first manual in this series to clearly identify substance abuse and dependence as pathological conditions different from substance use alone. DSM-III also alluded to the fact that social and cultural factors are contributors to the onset and continuation of abuse and dependence. The DSM-III definition of dependence emphasized tolerance (needing to take much higher doses of the substance to obtain the same effect) and withdrawal (having a distinct pattern of physiological arousal upon abrupt discontinuation or reduction in dosage), and required the presence of one or both of these phenomena to make a dependence diagnosis. Substance abuse was defined as problematic use with social or occupational impairment, but with the absence of significant tolerance and/or withdrawal. In both disorders, impairment in social and occupational function was a prominent aspect of the definitions, creating a significant overlap between the criteria for substance abuse and dependence. In 1987, DSM-III was revised (DSM-III-R) to give the behavioral aspects of substance use disorders equal weight to the physiological components.

This shift away from the physiological to the behavioral elements of dependence was strongly influenced by the work of researchers Edwards and Gross, who had extensively studied persons

with alcohol problems. These researchers conceptualized alcohol dependence as a syndrome of graded severity that involved an interconnected complex of behavioral, psychological, and physiological elements associated with loss of control over alcohol consumption.

Contributing to the emphasis on behavioral aspects of dependence was work by Brady, Thompson, and others who had shown that animals can be taught to self-administer substances of abuse. Once taught, it was observed that most animals will expend tremendous amounts of energy to obtain additional doses and that this “drug-seeking behavior” is very difficult to extinguish. Efforts to repeat drug self-administration were especially prominent if the experimental drug was one with a high abuse liability such as morphine, methamphetamine, or (especially) cocaine and was difficult to extinguish.

This body of work was among the first in a line of investigation studying the behavioral aspects of drugs. This field of research became known as “behavioral pharmacology” and was strengthened by additional studies by Olds and others.

Thus, both the work of Edwards and Gross, that of behavioral pharmacologists, and of basic scientists pointed toward the presence of a definable and independent syndrome that can result after an organism has learned to self-administer abusable substances. This syndrome was not dependent on the ability of the drug to produce tolerance and withdrawal, but rather on its positive reinforcing effects. These effects were evident by observing the behavior of the organism, and could be measured by quantifying the work that the organism would produce to obtain the substance.

The development of the substance use disorders section for DSM-IV began in 1988 and involved the most extensive process yet undertaken for such a task. The major change in DSM-IV is in the definition of substance abuse. Unlike DSM-III and DSM-III-R, DSM-IV clearly separates the criteria for dependence from those of abuse. Dependence in DSM-IV is a syndrome involving compulsive use, with or without tolerance and withdrawal; abuse is problematic use without

compulsive use, significant tolerance, or withdrawal. Preliminary data from the DSM-IV field trials indicate that this change will probably increase the number of persons diagnosed as having substance abuse, especially for those using hallucinogens, inhalants, sedatives, and amphetamines.

Substance Use and the Transition to Abuse/Harmful Use or Dependence

One problem in developing criteria for this second, nondependent category, whether called abuse or harmful use, is that though dependence has been well-studied, the progression from use to abuse has not been adequately researched (except in the case of alcohol); and depending on the perspective, may not always be linear. For example, using the DSM-IV classifications, it is possible that substances such as opiates may follow a path that begins with use and progresses to dependence before abuse-related problems are identified. Within the field of alcohol research, the consensus of studies is that consuming three to four standardized drinks/day by males (equal to 40 or more grams of alcohol at 12 grams/drink) is associated with an increased probability for the development of problems. As females tend to absorb alcohol more quickly, studies have shown that problems typically begin at about two to three drinks/day (1,2,5).

Little work has been done on other substances. All persons who end up with abuse, harmful use, or dependence begin with use. Use of a substance, whether licit or illicit, does not constitute a substance use disorder even though it may be unwise and strongly disapproved of by family, friends, employers, religious groups, or society at large. Use by itself is not considered a medical disorder. For a disorder to be present, use must become something else such as: occur more frequently; occur at higher doses; or result in a magnitude of problems. Though there have been some conceptual models developed for how one might approach a better understanding of this transition, there are few data available to clearly point out where the border lies.

DSM-IV AND ICD-10 DEFINITIONS

■ DSM-IV Diagnostic Criteria:

Abuse

- A. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one or more of the following occurring over the same 12-month period:
1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (e.g., repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household).
 2. Recurrent substance use in situations in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use).
 3. Recurrent substance-related legal problems (e.g., arrests for substance-related disorderly conduct).
 4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (e.g., arguments with spouse about consequences of intoxication, physical fights).
- B. Has never met the criteria for Substance Dependence for this substance.

Dependence:

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three or more of the following occurring in the same 12-month period:

1. Tolerance, as defined by either of the following:
 - a. need for markedly increased amounts of the substance to achieve intoxication or desired effect
 - b. markedly diminished effect with continued use of the same amount of the substance

2. Withdrawal, as manifested by either of the following:
 - a. the characteristic withdrawal syndrome for the substance
 - b. the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms
3. The substance is often taken in larger amounts or over a longer period than was intended
4. Any unsuccessful effort or a persistent desire to cut down or control substance use
5. A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use of the substance (e.g., chain-smoking), or recover from its effects
6. Important social, occupational, or recreational activities given up or reduced because of substance use
7. Continued substance use despite knowledge of having had a persistent or recurrent physical or psychological problem that is likely to be caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption)

Specify if:

- **with physiological dependence:** Evidence of tolerance or withdrawal (i.e., either items (1) or (2) are present).
- **without physiological dependence:** No evidence of tolerance or withdrawal i.e., neither items (1) nor (2) are present).

■ ICD-10 Diagnostic Criteria for Clinical Use:

Harmful Use:

A pattern of psychoactive substance use that is causing damage to health. The damage may be physical (as in cases of hepatitis from the self-administration of injected drugs) or mental (e.g., episodes of depressive disorder secondary to heavy consumption of alcohol).

The diagnosis requires that actual damage should have been caused to the mental or physical health of the user. Harmful patterns of use are often criticized by others and frequently associated with adverse social consequences of various kinds. The fact that a pattern of use of a particular substance is disapproved of by another person or by the culture, or may have led to socially negative consequences such as arrest or marital arguments is not in itself evidence of harmful use.

Acute intoxication or “hangover” is not in itself sufficient evidence of the damage to health required for coding harmful use. Harmful use should not be diagnosed if dependence syndrome, a psychotic disorder, or another specific form of drug- or alcohol-related disorder is present.

Dependence Syndrome

A definite diagnosis of dependence should usually be made only if three or more of the following have been experienced or exhibited at some time during the previous year:

1. A strong desire or sense of compulsion to take the substance.
2. Difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use
3. A physiological withdrawal state when substance use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms.
4. Evidence of tolerance such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol- and opiate-dependent individuals who may take daily doses sufficient to incapacitate or kill nontolerant users)
5. Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amounts of time necessary to obtain or take the substance or recover from its effects.

6. Persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of harm.

Narrowing of the personal repertoire of patterns of psychoactive substance use has also been described as a characteristic feature (e.g., a tendency to drink alcoholic drinks in the same way on weekdays and weekends, regardless of social constraints that determine appropriate drinking behavior).

It is an essential characteristic of the dependence syndrome that either psychoactive substance taking or a desire to take a particular substance should be present; the subjective awareness of compulsion to use drugs is most commonly seen during attempts to stop or control substance use. This diagnostic requirement would exclude, for instance, surgical patients given opioid drugs for the relief of pain, who may show signs of an opioid withdrawal state when drugs are not given but who have no desire to continue taking drugs.

The dependence syndrome may be present for a specific substance (e.g., tobacco or diazepam), for a class of substances (e.g., opioid drugs), or for a wider range of different substances (as for those individuals who feel a sense of compulsion regularly to use whatever drugs are available and who show distress, agitation, and/or physical signs of a withdrawal state upon abstinence).

The diagnosis of the dependence syndrome may be further specified by the following (the following roughly correspond to the course modifiers and relapse section of DSM-IV):

- Currently abstinent.
- Currently abstinent, but in a protected environment (e. g., in hospital, in a therapeutic community, in prison, etc.).
- Currently on a clinically supervised maintenance or replacement regime (controlled dependence, e.g., with methadone; nicotine gum or nicotine patch).
- Currently abstinent, but receiving treatment with aversive or blocking drugs (e. g., naltrexone or disulfiram).
- ™ Currently using the substance (active dependence).
- Continuous use.
- Episodic use.