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The "Urge to Classify" the Drug User: A Review of Classifications by Pattern of Abuse

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Abstract

Attempts to classify drug abusers are divided into three main categories: (1) psychiatric classifications, (2) psychosocial classifications and (3) classifications by pattern of abuse. The present article focuses on pattern of abuse classifications which are divided into two subcategories: (a) by substance of abuse and (b) by degree of involvement. The various groups of these classifications are reviewed and their potential uses are discussed. The review indicates that classifications by substance of abuse may be useful for administrative and theoretical purposes, while their clinical uses are limited to medical emergencies. On the other hand, classifications by degree of involvement are useful for initial treatment planning and for predicting treatment outcomes. The authors conclude that for a thorough treatment planning and for better understanding of the addiction process, psychosocial classifications may be the most useful approach.

A survey of the recent drug abuse literature reveals a growing awareness that it is somewhat misleading to view all addicts as members of a distinct

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homogeneous group. The World Health Organization (Eddy, Halbach, Isbell, and Seevers, 1965), the National Commission on Marijuana and Drug Abuse (1973), the Subcommittee on Drug Addiction of the New York Academy of Medicine (1955), and numerous researchers and clinicians (Einstein, 1969; Einstein and Quinones, 1971; Glatt, 1974; Gregory, 1971; Levine and Stephens, 1973) have called for a workable classification system. This call has been answered in a number of ways. Drug users have been classified according to race (Chambers, Hinesley, and Moldestad, 1970), psychopathology (Gerard and Kornetsky, 1954; L. Kolb, 1925), drug use history (Braucht, Kirby, and Berry, 1978), social status (Brill and Lieberman, 1969), criminality (Babst, Ellis, and Schmidler, 1976), and use of alcohol (Barr and Cohen, 1978), and by various permutations and combinations of these variables. However, the very number and variety of these classifications attempts have created a great deal of confusion.

One way to lessen this confusion is to systematically organize and examine the various classification efforts. Briefly, classifications can be divided into three main categories: (1) classifications based on the psychiatric diagnosis of the drug user (Cohen, 1982, 1984), (2) classifications based on the psychosocial characteristics of the drug user (Brotman and Freedman, 1968; Cohen, 1986; Joe and Simpson, 1974), and (3) classifications based on the pattern of abuse. This last category is the subject of the present review.

Pattern of abuse classification can be further subdivided into two subcategories. The first concentrates on the substance; researchers using this approach have examined numerous case histories of drug users in search of a useful classification of substances, or substance combinations, that have been used. In contrast, the second subcategory concentrates on the interrelationship between person and substance, and examines stages of use or abuse and degrees of involvement with the substances.

SUBSTANCE-BASED CLASSIFICATIONS

One simple way to classify drug users is according to the primary drug of use/abuse. One early drug-based classification is that of Eddy, Halbach, Isbell, and Seevers (1965). They divided drug dependency into six types: drug dependency of morphine type, hallucinogen type, alcohol-barbiturate type, cannabis type, khat type, and cocaine type. The underlying assumption behind this approach of classification is that users of one drug are distinct enough from users of another drug in some characteristics that are meaningful on theoretical grounds or useful for diagnostic and treatment purposes. This assumption is made more explicit by studies which compare users of different drugs on social and psychological variables (Bowker, 1977; Davis and Munoz, 1968; Frosch and Milkman, 1977; Kissin, 1972; Milkman and Frosch, 1973; Penk, Robinowitz and

Fudge, 1978; Toomey, 1974; Trevithick and Hosch, 1978) or on motivation for drug use (Nail, Gunderson, and Kolb, 1974), or examine the relationship between drugs of abuse and psychiatric diagnosis (McLellan and Druley, 1977; Sharoff, 1969). While the preceding studies indicate personality and motivational differences between users of different drugs, other investigators have found no such differences among similar groups of addicts (Graf, Baer, and Comstock, 1977; Henriques, Cutter, Arsenian, and Samaraweera, 1972).

The contradiction between the findings of these studies has not yet been resolved, but it may well be based on differences in subject populations, research techniques, and definition of terms. Indeed, Walizer (1975) reports a great deal of variation in the meaning of drug terms. Marijuana, he reports, is included in some studies among hallucinogens and in others as a separate class. Similarly, hashish is sometimes classified together with marijuana and sometimes not. A partial solution to this problem may be the adoption of Bateman's functional taxonomy (1975), which already outlines the drugs that belong to pharmaceutically similar classes.

In addition to the contradictory results that have been reported, there are at least two serious problems with classifications of drug users on the basis of their substance of abuse. First, a drug user rarely abuses only one drug. Multiple abuse, both sequential and concurrent, is increasintly common (Carrol, Malloy, and Kendrick, 1980; Kaufman, 1976a). Second, the drug an addict uses is subject to number of influences, some of which are beyond his control. Availability of different drugs varies drastically from time to time and place to place. Thus, availability, rather than personal preference, may influence the substance an addict is using when he is classified. Research supporting a strong relationship between availability and use (National Commission on Marijuana and Drug Use, 1973; Smart, 1977, 1980) suggests that assignment of particular individuals to types based on drug of choice would result in rapid switches among types as drug markets change.

One solution to the problem of multiple use has been the development of classification systems based on drug combinations. While some investigators identified and studied specific drug combinations, such as alcohol and heroin (Barr and Cohen, 1978) or alcohol with other drugs (Polacsek et al., 1972), others attempted more inclusive solutions to the problem. The most comprehensive solution would be to include all possible drug combinations. However, to do this literally is nearly impossible, since the possible combinations are too numerous to be useful (the number of combinations in the case of 15 drugs is 2 to the power of 15, or 32,768). Therefore, researchers have had to compromise between comprehensiveness and practicality, and various compromise solutions have been worked out.

Simpson and Sells (1974) studied data from 11,380 drug-addicted patients and identified 28 common patterns of abusers based on eight major drug

classes. Even this solution proved too cumbersome, so further analysis was done which reduced the number of patterns to nine. This classification has been found useful in differentiating among the types on causes of deaths and alcohol abuse (Watterson, Simpson, and Sells, 1975) as well as on race-ethnic background and age (Curtis and Simpson, 1976).

Farley (1977) studied 1,127 drug abusers and concluded that 11 drug combinations adequately characterized his sample. He too validated his typology by finding substantial differences among the types in nondrug characteristics, including sex, age, and treatment history.

Braucht, Kirby, and Berry (1978) employed chronicity-frequency indices for 15 drugs and obtained via cluster analysis eight clusters of users who differed on drug use, criminality, and socioeconomic status as well as demographic and psychological variables.

Kaufman (1976a, 1976b) took a more general approach and classified multiple drug abuse into four types—narcotic abuse with other drugs, methadone maintenance with other drugs, alcohol abuse with other drugs, and abuse of nonnarcotic psychoactive drugs.

Still other investigators have taken an even more general approach, and merely differentiated between multiple and single substance abusers. Smart and Whitehead (1972) listed four types of abuse—single legal drug, multiple legal drugs, single illicit drug, and multiple illicit drugs—and reported that the types differed in their motivation for drug use. Cook, Hostetter, and Ramsay (1975) also found differences between single (mostly marijuana) and multiple abusers, and Robbins (1970) reported that those who used amphetamines only differed from those who mixed it with variety of other drugs.

Taking this trend toward increased generality to its logical conclusion, one may offer a classification that merely differentiates addicts from nonaddicts. This is the essence of the generic approach to substance abuse, which views all addictions—whether to alcohol, tobacco, or any other drug—as chemical solutions to the hardship of everyday life. Thus, according to this approach, all addictions are essentially the same and divisions among them are arbitrary and of no theoretical or practical value.

The classifications which have been reviewed to this point are based on combinations of drugs, and they offer a solution to the difficulty of classifying concurrent multiple substance abusers. Nevertheless, this approach ignores the problem raised by sequential abuse. One way to approach the classification of sequential substance abuse is to explicitly study sequential patterns of abuse.

Many studies on sequential substance abuse are based on some version of the "stepping stone theory" (see Johnson, 1973). This theory hypothesizes a progressive relationship between certain drugs. Thus, according to this theory, a person who uses alcohol is more likely to use marijuana than a non-alcohol user. In turn, a marijuana user is more likely to use barbiturates, and a barbitu-

rate user is more likely to use heroin. One way to study these relationships is through Guttman's scalogram analysis.

Guttman's scalogram analysis (see Eduards, 1957) is a technique for measuring the progressive interrelationships among a series of variables. A Guttman scale can be formed if the occurrence of one factor at the end of a scale predicts with high reliability the occurrence of a series of factors lower on the scale. Using the preceding example, if all heroin users had also used barbiturates, marijuana, and alcohol, and all barbiturate users had used marijuana and alcohol, and so on, then drug use would be highly scalable. A number of investigators claim they have found such relationships among certain drugs (Gould, Berberian, Kasl, Thompson, and Kleber, 1977; Kandel and Faust, 1975; Kessler, Paton, and Kandel, 1976; Mercer and Hundleby, 1978). Campbell and Freeland (1974) did an extensive study on progressive and cooccurrence of drug use, and concluded that definite patterns did exist and could be fruitfully used in generating typologies.

DEGREE OF INVOLVEMENT

Another approach to classification of drug users based on pattern of abuse is to ignore the particular use of this drug or that drug and, instead, focus on the interaction between the drug and the person, thus shifting the attention to the degree of involvement in drug use. Chapple, Somekh, and Taylor (1972) followed 108 British opiate addicts for 5 years and classified them as early users, prechronic users, and chronic users. They found that their groups differed substantially on outcome variables, with early addicts being most likely to stop using drugs. On the basis of these findings they suggested differential treatment for each group of addicts.

Cockett (1971) classified abusers according to their commitment to addictive behavior. He postulated four categories ranging from those who have only experimented with drugs to those who are diagnosed as addicted. Brill and Lieberman (1969) also place emphasis on commitment to the addictive system, as does the National Commission on Marijuana and Drug Abuse Report (1973), which describes experimental users, circumstantial users, intensified users, and compulsive users. Other investigators make a grosser distinction and merely differentiate between light and heavy users. For example, Nail, Gunderson, and Kolb (1974) have developed such a division which has been validated through motivational differences between light and heavy users.

Another measure of degree of involvement is indexing. Both Lu (1974) and Gunderson, Russell, and Nail (1973) developed a weighted index of drug types and frequency to measure severity of abuse. Holland (1978) employed a modified version of Gunderson, Russell, and Nail's index and found a moderate relationship between the index and MMPI scores. Douglass and Khavari (1978)

developed a similar index and showed a correlation between the index and several personality tests.

While the preceding investigators attempted to study degree of involvement directly, other researchers chose a more indirect route. One such indirect way of measuring degree of involvement is by mode of administration. This approach assumes that some routes of administration, such as intravenous injection, reflect a deeper involvement in drug use than other routes, such as sniffing. D. Kolb, Nail, and Gunderson (1974) studied Navy heroin addicts in Vietnam and found consistent psychological differences between inhalers (who smoked, sniffed, or inhaled heroin) and injectors.

Pattern of classification, then, can be based on either substance of abuse or degree of involvement. Substance of abuse classification can be further subdivided into: (1) those based on single substance, (2) those based on a comprehensive set of substance combinations, and (3) those based on single versus multiple abuse. Degree of involvement classifications can, in turn, be subdivided into: (1) those directly measuring degree of involvement, (2) those measuring degree of involvement through indexing, and (3) those measuring degree of involvement through mode of administration.

THE UTILITY OF PATTERN OF ABUSE CLASSIFICATION

The previous discussion deals with how classifications by pattern of abuse have been done. However, a more important issue is how these classifications are used.

A classification according to the major substance of abuse exists even in the street culture, where a drug user is identified as "alcky," "pothead," "acidhead," "speed freak," or "junkie." Such labels may give members of this subculture a sense of identity and may convey for them certain practical information. However, professional health workers, researchers, and government officials employ such classifications as well. Table 1 contains the various classifications by pattern of abuse, their potential users, the users' outlook, and how they may use them.

As can be seen in Table 1, pattern of abuse classifications are used mainly for administrative purposes and for gaining theoretical knowledge. Their clinical applications, however, are limited mainly to medical emergencies, and classification by degree of involvement is the only one that is useful for addiction treatment per se. Indeed, an occasional user of heroin should be treated differently than a long-term heroin addict.

As for classifications by the major substance of abuse, one may argue that knowing what drug a person has been abusing may be helpful in understanding his personal characteristics and his psychological needs. This argument, however, is invalid, for no responsible therapist would infer the psychological needs

Table 1

The Use of Classifications by Pattern of Abuse

The classification	The user	The outlook	The use
1. Substance-based classifications			
	Physician	Clinical	Treatment of drug use overdose
	Physician	Clinical	Treatment of prolonged substance-abuse-related medical conditions
	Psychiatrist	Clinical	Evaluation of certain mental conditions that may be caused by drug abuse
Major substances of abuse and concurrent multiple abuse	Epidemiologist	Research/theoretical	Evaluation of prevalence and instances of drug abuse
	Government health officials	Administrative	Needs assessment and policy planning
	Control agencies	Administrative	Evaluating routes of "drug traffic" and planning supply-reduction campaigns
	Addiction researcher	Theoretical	Studying the effects of different drugs and searching for the underlying motivations for using them.
Sequential drug abuse	Addiction researcher	Theoretical	Studying the addiction process
2. Degree of involvement classifications	Addiction therapist	Clinical	Initial treatment planning
	Government health officials	Administrative	Needs assessment for prevention

of a patient who is a drug addict on the basis of his substance of abuse, where an interview or a standard psychological test would give much more reliable information on these issues.

However, the notion that people who abuse different drugs need different treatment settings has been supported by the federal government, which established two separate agencies for the treatment of different drug abusers—the National Institute on Alcohol Abuse and Alcoholism, and the National Institute on Drug Abuse (cf. Pittman, 1967, vs Glatt, 1970, and Whitney, 1970). Of course, there are some cultural and historical reasons why alcohol abusers and drug abusers are treated separately, but, on the other hand, there are no conclusive evidences that a combined treatment of drug addicts and alcoholics is less effective than a separate treatment (cf. Aumack, 1980, vs Baker, Lorei, McKnight, and Duvall, 1977).

Nevertheless, this review indicates that the various classifications by pattern of abuse have some merit. Some studies on the differences between abusers of different drugs suggest the possibility that abusers of "uppers" may have different psychological characteristics than abusers of "downers." Research on multiple substance abuse indicates that the multiple substance abuser is more emotionally disturbed than the single substance abuser, and similar findings were found in studies on classifications by degree of involvement. Studies on classifications of sequential substance abuse may be useful in explaining the process by which a person becomes more deeply involved in substance abuse. However, from the theoretical point of view, pattern of abuse classifications do not offer satisfactory explanations as to why some people use drugs and others don't, and why some of those who experiment with drugs never go beyond this stage, while others sink deeply into addiction and its harmful consequences. Furthermore, from the clinical point of view, pattern of abuse classifications have a very limited value in designing treatment plans for the individual user or in predicting his treatment outcomes. At best, the various categories of these classifications may serve as markers of the severity of the psychological status of the drug abuser. In addition, labeling an individual according to his substance of abuse is potentially harmful as it may be interpreted as a description of what the person is rather than what he does (cf. Williams, 1976). In addition, such an approach tends to focus on the substance of abuse and distracts us from seeing the drug abuser as a human being who has turned to drug use in an unsuccessful attempt to solve personal hardships.

Several years ago the Domestic Council Drug Abuse Task Force identified five questions as top research priority. Two of these were "whether characteristics of a client's profile at admission can be predictors of probable success in one type of treatment vs. another type" and "what treatment methods work best for each type of client" (1975, p. 58). Pattern of abuse classifications have not responded to these questions successfully. Thus, it seems that if the assump-

tion that "all drug addicts are not the same" is valid, then different criteria for classification are called for. Another possible criterion is psychiatric classification, namely a classification that is based on the amount and type of psychopathology that the drug abuser may have. However, a recent literature review of classifications of drug abusers that are based on this criterion (Cohen, 1982, 1984) indicates that, at least for narcotic addicts, psychiatric classifications have not made any significant theoretical or clinical contributions to substance abuse research. One possible reason for the lack of success of these approaches may lie in the fact that both of them focus on a rather narrow range of the abuser's behavior, namely his difficulties and mainly at the present. One approach that takes a broader view of the drug abuser as a person is the psychosocial classification. Such a classification should include the social characteristics of the drug abuser, including his socioeconomic background, his social network, family background, work history, and education as well as his psychological characteristics such as personality, coping skills, potential for growth, and psychopathology. Unfortunately, studies that are based on this approach are rare and urgently needed.

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