

Profiles of Club Drug Users in Treatment

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There is little in the literature about treatment of persons with problems with “club” or “party” drugs. This paper looks at the characteristics of individuals admitted to treatment for primary, secondary, or tertiary problems with club drugs such as ecstasy, gamma-hydroxybutyrate (GHB), ketamine, flunitrazepam (Rohypnol), methamphetamine, and hallucinogens (e.g., LSD) in programs funded by the Texas Commission on Alcohol and Drug Abuse. Some 38,350 unduplicated records from 1988 through 2003 of persons admitted with problems with club drugs were compared against users of alcohol or other drugs. Club drug users were more impaired on five of six Addiction Severity Index (ASI) indices at admission and they were more likely to use multiple substances more often. They were more likely than users of alcohol or other drugs to complete treatment, but this varied by drug. At follow-up 90 days after discharge, club drug users continued to report more ASI problems. Profiles of these clients show that ecstasy use has spread beyond the club culture, as indicated by the changes in client demographics over time. GHB clients presented a mixed picture of severe problems at admission and good response to treatment. Hallucinogen clients were young and less likely to complete treatment, while Rohypnol users were on the Texas-Mexico border. The methamphetamine epidemic has resulted in increased admissions, and the proportion of “Ice” smokers has increased. However, methamphetamine clients were less likely to complete treatment and their higher level of problems at admission and follow-up are of concern. Of special note are the indications of co-occurring problems and the need for both mental health and substance dependence treatment for some clients.

Keywords club drug user treatment; ecstasy; GHB; ketamine; Rohypnol; methamphetamine; ice; hallucinogens; LSD; Texas; party drug user treatment

Introduction

Information on treatment for “abuse” or “dependence” on the various club drugs ranges from sparse to extensive, and there is evidence that these drugs can have serious psychiatric side effects. An examination of responses to the emergence of club drugs such as ecstasy (MDMA), gamma-hydroxybutyrate (GHB), ketamine, and flunitrazepam (Rohypnol) found that information is lacking on effective treatments for these drugs (Maxwell, 2003, 2005). Likewise, there is little recent literature on substance user treatment for persons with problems with hallucinogens. In comparison, the literature on treatment of methamphetamine dependence is extensive and focuses on research-based methods (Rawson et al., 2002).

Brain imaging studies have provided information on how use of the stimulant methamphetamine changes the neurochemistry of the brain and that treatment needs to extend

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through the period of protracted abstinence anxiety, cognitive disruption, and anhedonia. Individuals with severe psychiatric impairment may need inpatient treatment with short-term use of antipsychotic and tranquilizer medications, and psychosocial and behavioral treatments have the best empirical support for long-term treatment (Rawson et al., 2002). Several manuals for cognitive-behavioral therapy and contingency management have proven effective with methamphetamine users (Huber et al., 1997; Rawson et al., 2000). The Center for Substance Abuse Treatment has funded a seven-site evaluation of the outpatient Matrix Model for treating methamphetamine (Anglin and Rawson, 2000); results from these evaluations have been published (Rawson, 1998; Rawson et al., 2002).

For ecstasy, a synthetic psychoactive drug with both stimulant and hallucinogenic properties, supportive care similar to treatment for amphetamine or methamphetamine overdose has been recommended; there is no antidote for ecstasy (Smith, Larive, and Romanelli, 2002). No withdrawal syndrome from ecstasy has been reported (Bialer, 2002), although a study of 173 adolescents and young adults interviewed with the Composite International Diagnostic Interview, Substance Module, found that 43% met the DSM-IV criteria for dependence on ecstasy and 34% met the criteria for abuse of ecstasy (Cottler et al., 2001). Studies have suggested recreational ecstasy use is related to depression and poorer memory as well as learning and attention abilities. One study found feelings of depression approached clinical levels of depression (McCardle et al., 2004). However, articles on evidence-based treatment for persons seeking help for ecstasy dependence do not appear to exist (Maxwell, 2003).

Severe withdrawal reactions have been reported among patients presenting from an overdose of the central nervous system depressant, GHB or its precursors, especially if other drugs or alcohol are involved (Bialer, 2002; Freese, Miotto, and Reback, 2002; McDaniel and Miotto, 2001; Mahr, Bishop, and Orringer, 2001; Schneir, Ly, and Clark, 2001). Although these case studies show the abuse potential, there is little information on treatment for dependence. Tolerance and dependence appear to build rapidly, and intervention and treatment efforts are often delayed because many providers lack knowledge of symptoms of GHB intoxication and dependence (Freese, Miotto, and Reback, 2002).

Ketamine is an anesthetic that is a derivative of phencyclidine hydrochloride (PCP). It may be used in a pattern of cyclical binges similar to cocaine or amphetamine dependence, and users can become psychologically dependent with cravings and a high tolerance (Jansen and Darracot-Cankovic, 2001). No antidote exists for ketamine; management of acute care symptoms encompasses supportive care with special attention to cardiac and respiratory functions (Smith, Larive, and Romanelli, 2002). Tolerance develops rapidly and can be at high levels. Jansen found little evidence of a physical dependence, although the literature contains case reports (Jansen and Darracot-Cankovic, 2001). A case study of two ketamine-dependent patients found that the psychotic symptoms resolved quickly with symptom-targeted treatment, but breaking the ongoing compulsion to use seemed more difficult (Lim, 2003). Once detoxified, one treatment protocol recommended following the model used for cocaine and amphetamine dependence, with abstinence from all drugs from the beginning of treatment. As with stimulant dependence, the therapist is advised to avoid confrontation, as the likelihood of the patient's dropping out of treatment is very high. Relapse prevention was also recommended (Jansen and Darracot-Cankovic, 2001). Studies have found that chronic use of ketamine may be associated with persistent impairment of memory and other cognitive functions in humans. Although ketamine may not affect attentional processes or spatial memory, evidence suggests it may interfere only selectively with cognition (Taffe et al., 2002), a factor which should be considered in treatment planning. Additional studies are needed to better understand the extent of ketamine abuse and dependence and

to identify symptoms of withdrawal and effective treatments (Freese, Miotto, and Reback, 2002).

Adverse effects of benzodiazepine, flunitrazepam (Rohypnol), include hypotension, dizziness, confusion, visual disturbances, urinary retention, and in some users, aggressive behavior (Smith, Larive, and Romanelli, 2002). Treatment for Rohypnol follows the protocol for any benzodiazepine with a 3- to 5-day inpatient detoxification program with 24-hour intensive medical monitoring and management of withdrawal symptoms, since withdrawal from benzodiazepines can be life-threatening. This protocol is appropriate for adolescents with multiple problems, including those who need rehabilitation or who have coexisting personality and substance use disorders (Winters, 1999). Additional therapies may be needed, since studies of juvenile delinquent populations have found flunitrazepam use can lead to serious violent behavior in these groups and in subjects characterized by vulnerable personality traits (Daderman et al., 2002; Daderman and Edman, 2001).

LSD (lysergic acid diethylamide) use can result in flashbacks, or Hallucinogen Persisting Perception Disorder (HPPD), without the user having taken the drug on more than one occasion. In addition to flashbacks, LSD users may manifest relatively long-lasting psychoses, such as schizophrenia or severe depression, and it is difficult to determine the extent and mechanism of the LSD involvement in these illnesses. The National Institute on Drug Abuse (NIDA) reported that most users *"voluntarily decrease or stop its use over time and LSD is not considered an addictive drug since it does not produce compulsive drug-seeking behavior, although it produces tolerance"* (National Institute on Drug Abuse, undated). Halpern and Pope (2003) surveyed the literature on flashbacks and found that despite its rarity, HPPD can cause substantial morbidity for some individuals, but that the literature on the treatment of this phenomena remained largely anecdotal. No randomized controlled trials have thus far assessed the efficacy of any pharmacological agent in patients with HPPD, and further research is needed to better understand the etiology and treatment of this "inadequately studied" condition (Halpern and Pope, 2003, p. 117).

Materials and Methods

Effective treatment protocols cannot be designed until there is more knowledge about the characteristics of persons who have entered treatment for problems with their use of club drugs. The client data system of the Texas Commission on Alcohol and Drug Abuse (TCADA) is one of the few that has been collecting information on these specific drugs. The admission form contains the minimum dataset information collected by all states in the federal Treatment Episode Data System (TEDS) as well as additional information on the number of days in the last 30 that the client experienced any of the six domains of the Addiction Severity Index (ASI), which include sickness and/or health problems, employment and/or school problems, family and/or marital problems, social or peer problems, emotional and/or psychological problems, and drug and alcohol problems (McLellan et al., 1980). Other variables reported at admission are number of hospital visits (regular admissions or emergency room) during the 12 months prior to admission and prescribed medication for a co-occurring or a "substance abuse" condition. It does not include medication prescribed for medical problems such as antibiotics or high blood pressure. Criminal justice or legal status shows that the person was awaiting trial, in a pretrial diversion program, on probation, parole, or in jail, etc. "Percent with history of IV drug use" shows the proportion of clients who reported they had ever injected any drug. "Average age of first use" is the age of first use of the primary problem drug, and "average lag from first use to admission" is the number of years since the client first began using the primary problem drug until the latest treatment

admission. Employment and individual annual income were reported only for clients over age 17.

At discharge, which must occur if the client has not been seen in 30 days, a report is submitted on reason for discharge, length of stay, participation in 12-step meetings, and use of medications during treatment. Use of medications was only reported for clients over age 17. Sixty days after discharge, the program must attempt to contact the client or family or friends and submit a follow-up report, which includes information on drug use at follow-up, as well as employment, legal status, and number of days in the past 30 that the client experienced problems with any of the ASI domains. The admission, discharge, and follow-up records are matched to allow comparison of the client's condition at these three stages.

Since the 1970s, data have been collected on "hallucinogens" such as lysergic acid diethylamide (LSD), dimethyltryptamine (DMT), dimethyloxymethylamphetamine (STP), mescaline, and psilocybin, but not ecstasy, and "stimulants," which were defined as Benzedrine, Dexedrine, Preludin, methamphetamine, Ritalin, speed, diet pills, and "Ice." Because the stimulant category includes both amphetamine pills, which are not commonly taken in the club drug setting, as well as methamphetamine, which is often considered a club drug, the analysis in this report excludes stimulant drugs that were taken by mouth, but includes those taken by inhaling, injecting, or smoking, routes of administration that are more commonly seen with the use of methamphetamine. Ecstasy was added as a drug category in 1989, Rohypnol in 1996, GHB in 1997, and ketamine in 2001. The present analysis will be on clients who entered treatment with a problem with ecstasy, GHB, hallucinogens, ketamine, methamphetamines, or Rohypnol.

All clients entering local treatment programs that receive funds from TCADA are reported on the data system. These clients are a low-income population, since TCADA-funded services are provided free to persons at 200% of the federal poverty level (FPL) and on a sliding-scale basis to those up to 300% FPL. Thus, this study provides insight into club drug users who represent one specific economic class of users.

In addition, the patterns of drug use in Texas are influenced by the make-up of its population, which in 2003 was 51% White, 12% Black, 34% Hispanic, and 3% "Other." The population of the state increased by 23% between 1990 and 2000, with a 54% increase in the Hispanic population. The proximity to Mexico is an influence, since illicit drugs enter from Mexico through cities such as El Paso, Laredo, McAllen, and Brownsville, as well as smaller towns along the border. A major problem is that U.S. citizens can purchase many controlled substances in Mexican pharmacies on the border and then legally bring these drugs into the U.S. This practice was a primary source of Rohypnol, since the drug had never been approved for sale in the U.S. After the U.S. Customs Service banned its importation in 1996, problems diminished except on the Texas border, where it continues to be smuggled across and used, as documented by the Texas secondary school surveys and treatment data (Maxwell, 2004).

The client data were provided by TCADA. Research using these data was approved by the Institutional Review Board of the University of Texas at Austin. Files were constructed to cover the period from January 1, 1988, when follow-up forms were begun, to December 31, 2003. One file contained 38,350 unduplicated records on all clients who entered treatment with a primary, secondary, or tertiary problem with a club drug. A "problem" is defined by TCADA as one that causes a client's dysfunction at time of admission. Some 19,045 had a primary problem with a club drug, 13,467 had a secondary problem with a club drug, and 5457 had a tertiary problem with a club drug. Because of the use of club drugs in combination, data on 3255 clients who reported problems with two or more club drugs were excluded in the analysis of the individual drugs for Tables 1, 2, and 3. Another file

Table 1

Characteristics of clients at admission to TCADA-funded treatment programs with a primary, secondary or tertiary problem with a club drug:
January 1, 1988–December 31, 2003

	Ecstasy	GHB	Hallucinogens	Ketamine	Methamphetamine	Rohypnol	No club drugs	All club drugs
Total admissions	1,398	45	5,928	7	26,006	1,711	349,842	35,095
Average age at admission	21.8	29.3	20.2	24.3	29.9	17.9	31.6	28.0 ^a
Average age 1st use	15.9	20.5	14.3	18.4	19.3	14.3	19.5	18.1 ^a
Average lag 1st use to admission	7.0	9.0	7.0	6.0	11.0	4.0	13.0	11.0 ^a
% First treatment admission	45.2	33.3	39.4	71.4	31.3	62.0	30.0	32.2 ^a
% Married	16.4	4.4	28.5	14.3	21.4	38.3	25.3	23.1 ^a
% Male	65.5	71.1	76.2	71.4	55.1	74.0	70.0	60.0 ^a
% History IV use	6.6	28.9	7.7	28.6	66.1	9.1	14.6	31.3 ^a
% Black	13.3	14.0	8.1	14.3	2.2	1.3	26.0	4.1 ^a
% White	64.0	63.0	66.0	42.9	90.5	6.8	42.5	81.7 ^a
% Hispanic	20.5	21.0	24.1	42.9	6.0	90.6	30.3	13.0 ^a
% Clients over 17 employed	30.1	30.0	34.1	42.9	30.3	26.6	32.8	31.3 ^a
% CJ or legal status	58.4	48.9	57.9	85.7	51.5	70.8	49.6	52.5 ^a
Average years education	10.9	11.8	9.8	12.1	11.3	9.0	11.0	11.0 ^a
% Homeless	8.7	8.9	7.5	0.0	6.4	5.9	8.1	6.8 ^a
Individual income at admission (clients over 17)	\$7,243	\$7,174	\$5,710	\$5,400	\$6,877	\$3,632	\$6,756	\$6,977
% on Medication for mental health or sub. abuse	18.0	31.1	11.3	42.9	22.8	9.3	23.1	20.7 ^a
% with Hospital visit in past year	19.5	40.0	7.7	14.3	23.5	6.6	15.3	19.8 ^a
ASI problems in month prior to admission	3.1	2.6	3.6	0.4	4.9	2.4	4.7	4.7
Days sickness or health problems	9.8	16.3	8.7	12.9	13.2	9.8	11.0	12.2 ^a
Days employment problems	9.0	12.4	8.5	11.4	13.4	9.1	9.9	12.3 ^a
Days family or marital problems	6.4	9.4	5.0	10.7	9.1	4.9	6.6	8.2 ^a
Days social or peer problems	9.3	15.6	9.5	12.9	14.5	6.1	10.1	13.0 ^a
Days emotional problems	10.5	15.7	9.1	16.7	15.6	8.8	13.0	14.1 ^a
Days drug or alcohol problems								

^aDifference between any club drug and no club drugs $p < 0.05$.

Table 2
Discharge data on clients who were admitted to TCADA-funded programs after 1/1/88 and discharged before 12/31/03 with a primary, secondary, or tertiary problem with a club drug or with no club drug problem

	Ecstasy users	Any Other club drug	GHB	Any other club drug	Halluci- nogens	Any other club drug	Metham- phetamines	Any other club drug	Rohypnol	Any other club drug	Any club drug	No club drug
% Completed treatment	39.0	27.3 ^a	52.3	27.7 ^a	24.1	28.6 ^a	25.3	32.8 ^a	50.5	26.7 ^a	25.6	24.1 ^a
Length of stay for completers (days)	71.7	59.1 ^a	64.3	59.7	110.7	53.0 ^a	46.2	92.6 ^a	81.3	58.1 ^a	59.8	58.0
# 12-Step meetings in last treatment month	4.9	5.5	6.0	5.5	3.5	5.9 ^a	6.7	3.5 ^a	2.1	5.8 ^a	5.5	4.9 ^a
% Clients over 17 received anti-depressant drug	5.0	5.6	15.3	5.5 ^a	2.4	6.3 ^a	6.7	2.7 ^a	0.9	5.8 ^a	4.0	5.2 ^a
% Clients over 17 received anti-anxiety drugs	4.9	6.6 ^a	5.9	6.5	2.1	7.5 ^a	8.1	2.3 ^a	1.8	6.7 ^a	2.3	6.6 ^a
% Abstinent during last treatment month	52.0	37.2 ^a	61.9	37.7 ^a	32.0	39.1 ^a	35.2	42.9 ^a	65.4	36.4 ^a	37.7	36.2 ^a

^a*p* < 0.05.

Table 3

Matched admission and follow-up measures of drug use and addiction severity index problem days on clients who were admitted to TCADA-funded programs after 1/1/88 with a primary, secondary, or tertiary problem with a club drug or with no club drug problem and followed-up before 12/31/03

	Ecstasy	Any other club drug	GHB	Any other club drug	Halluc-nogens	Any other club drug	Metham-phetamine	Any other club drug	Rohypnol	Any other club drug	Any club drug	No club drugs
% Client contacted	20.0	20.6	13.3	20.6	25.9	19.5 ^a	19.2	23.9 ^a	23.6	20.4 ^a	21.0	21.4
% Family contacted	26.3	21.7 ^a	20.0	21.9	28.6	20.6 ^a	19.4	28.0 ^a	24.8	21.7 ^a	21.3	21.7
# Follow-up records	558	12346	15	12889	2,039	10,865	8,821	4,093	766	12,138	12,199	135,846
# Days used drug1 at admission	9.5	9.5	12.9	9.5	8.5	9.6 ^a	9.6	9.2 ^a	9.9	9.4	11.8	14.2 ^a
# Days used drug1 at follow-up	2.7	3.3	2.8	3.3	3.4	3.3	3.4	3.0 ^a	2.6	3.4 ^a	3.8	4.9 ^a
# Days used drug2 at admission	5.5	6.0	5.3	6.0	4.3	6.4 ^a	6.5	5.3 ^a	6.0	6.0	8.1	9.8 ^a
# Days used drug2 at follow-up	1.2	1.7	0.0	1.6 ^a	1.1	1.8 ^a	1.9	1.3 ^a	1.7	1.6	1.8	2.1 ^a
# Days used drug3 at admission	4.1	5.1 ^a	4.0	5.0	2.6	5.7 ^a	6.2	3.9 ^a	5.3	5.0	6.1	7.2 ^a
# Days used drug3 at follow-up	0.9	1.5	0.0	1.5	0.8	1.7 ^a	2.0	1.1 ^a	1.9	1.4	1.6	1.6
# ASI sickness days at admission	2.8	3.8 ^a	2.4	3.7	3.0	3.9 ^a	4.5	2.5 ^a	2.0	3.9 ^a	4.7	4.7
# ASI sickness days at follow-up	0.7	1.4 ^a	2.5	1.4	0.8	1.5 ^a	1.8	0.7 ^a	0.8	1.4 ^a	1.6	1.6
# ASI employment problems days at admission	8.1	10.5 ^a	16.0	10.4	7.6	10.9 ^a	11.9	8.0 ^a	8.4	10.6 ^a	12.1	11.0 ^a
# ASI employment problems days at follow-up	2.8	3.7 ^a	5.0	3.6	2.5	3.9 ^a	4.1	2.9 ^a	3.3	3.7	3.7	3.5 ^a

(Continued on next page)

Table 3

(Continued) Matched admission and follow-up measures of drug use and addiction severity index problem days on clients who were admitted to TCADA-funded programs after 1/1/88 with a primary, secondary, or tertiary problem with a club drug or with no club drug problem and followed-up before 12/31/03

	Ecstasy	Any other club drug	GHB	Any other club drug	Halluci-nogens	Any other club drug	Metham-phetamine	Any other club drug	Rohypnol	Any other club drug	Any club drug	No club drugs
# ASI family problem days at admission	7.7	9.9 ^a	8.3	9.8	7.1	10.3 ^a	11.6	6.9 ^a	7.2	10.1 ^a	12.2	9.9 ^a
# ASI family problem days at follow-up	2.4	3.1	2.7	3.1	2.7	3.2	3.4	2.6 ^a	3.0	3.1	3.3	2.7 ^a
# ASI social problem days at admission	5.2	6.2 ^a	4.0	6.1	3.9	6.6 ^a	7.4	4.1 ^a	3.6	6.4 ^a	8.2	6.6 ^a
# ASI social problem days at follow-up	1.6	1.8	2.8	1.8	1.4	1.9 ^a	2.1	1.4 ^a	1.5	1.9	1.95	1.6 ^a
# ASI psychological problem days at admission	7.5	10.5 ^a	13.3	10.4	7.7	10.9 ^a	12.9	6.3 ^a	4.7	11.0 ^a	13.2	10.1 ^a
# ASI psychological problem days at follow-up	1.9	3.1 ^a	4.9	3.1	2.1	3.3 ^a	3.9	1.8 ^a	1.6	3.2 ^a	3.4	2.5 ^a
# ASI drug/alcohol problem days at admission	8.4	10.9 ^a	12.7	10.8	7.4	11.4 ^a	13.0	7.2 ^a	6.4	11.2 ^a	14.1	13.0 ^a
# ASI drug/alcohol problem days at follow-up	1.7	2.6 ^a	2.9	2.6	1.8	2.7 ^a	3.1	1.8 ^a	2.2	2.6	2.8	2.6

^a $p < 0.05$.

for the same time period was constructed of 349,842 unduplicated records of clients who did not report problems with any of these club drugs. Associations between variables in each club drug category were compared against all of the other club drug categories using the chi-square analysis for the categorical variables and t-tests for continuous variables. All differences that are discussed in the text are statistically significant unless otherwise noted. Because of the small number of cases of GHB, significance could not be tested for all variables, and data on ketamine clients are only shown in Table 1. The SAS system for Windows V8 was used for analysis of the data.

Results

Changes in Patterns of Use Over Time

The number of unduplicated methamphetamine admissions to Texas programs has increased from 1073 in 1988 to 4075 in 2003, and the number of ecstasy admissions has increased from nine in 1989 to 409 in 2003. Levels of hallucinogen admissions climbed from 136 in 1988 to 631 in 1999 before declining to 255 in 2003, and levels of Rohypnol admissions rose from 104 in 1996 to 271 in 2001 and then dropped to 230 in 2003. GHB admissions increased from two in 1997 to 26 in 2002 and then declined to 21 in 2003, while the number of ketamine admissions rose from one in 2001 to nine in 2003.

Members of NIDA's Community Epidemiology Work Group have reported that ecstasy use has spread beyond the club drug scene into the streets and into other race/ethnic groups (National Institute on Drug Abuse, 2003), and this trend was seen in Texas, where the proportion of Whites entering treatment for a problem with ecstasy has declined from 100% in 1989 to 51% in 2003. At the same time, the proportion of Hispanics has increased to 28% and the proportion of Blacks has increased to 18% by 2003.

Clients who had problems with hallucinogens are also, over time, less likely to be White. The proportion of White clients has dropped from 72% in 1988 to 56% in 2003, while the proportion of Hispanics has remained level from 23% to 26% and the proportion of Black clients has increased from 3% to 15%.

Methamphetamine admissions, in contrast, have remained predominately White (91%), although the route of administration has changed with an increase in the use in Texas of "Ice," the smoked form of methamphetamine. The percentage injecting methamphetamine decreased from 84% in 1988 to 52% in 2003, while the percentage smoking methamphetamine has increased from 1% to 29% during the same time period.

Club Drug Users as Compared to Nonclub Drug Users

Admission Characteristics. Table 1 shows the characteristics of clients admitted with a primary, secondary, or tertiary problem with a club drug between 1988 and 2003, as well as the characteristics of all clients admitted in that period without a problem with any club drug. The primary problem drugs for nonclub drug users were alcohol (41%), crack cocaine (23%), heroin (11%), marijuana (11%), and powder cocaine (10%). Only 59% of nonclub drug users were admitted with a second drug problem, as compared to 89% of club drug admissions. The differences between those who did and did not use club drugs were significant for all variables except individual annual income and number of days of sickness or health problems in the month prior to admission.

Discharge Characteristics. Table 2 shows that club drug users were more likely than nonclub drug users to complete treatment, but there was no overall difference in the length of stay. Club drug users attended more 12-step meetings and were more likely to be abstinent in the month prior to discharge, but they were less likely to have received antidepressant or antianxiety medications during treatment.

Follow-Up Characteristics. There were no differences in the proportions of club drug and nonclub drug users or their families who were contacted at follow-up (Table 3). Nonclub drug clients were more likely to report more days of use of their primary and secondary problem drugs at both admission and follow-up, but club drug users were more likely to report more days of problems with most ASI categories at both admission and follow-up.

Analysis of Characteristics of Users of Different Club Drugs

Admission Characteristics. In terms of the specific drugs, Whites were more likely to be users of methamphetamine, while Hispanics were more likely to be users of Rohypnol. Some 71% of Rohypnol admissions came from programs located on the border. Rohypnol clients were the youngest in terms of age of first use and age of admission to treatment, and their youthful admissions reflect their involvement in the juvenile justice and criminal justice systems (Table 1).

Hallucinogen admissions were the most likely to be male and to start their drug use at a young age. They were not likely to report a history of injecting drug use, and the number of days in which they reported ASI problems was low. Ecstasy users looked similar to hallucinogen users, although they were slightly older at admission and when they first used drugs. Ecstasy users were less likely to be married or to have a history of injecting drug use, but, over time, more likely to include a larger proportion of Black clients, as compared to the other club drug categories.

Methamphetamine clients were not as likely as other club drug clients to be male, but they were the oldest, with more years of drug use, previous treatment experience, and histories of injecting drug use. They reported more days of problems on all six of the ASI indices. GHB users were the least likely to be married (4%), and they more likely to have had more visits to hospitals or emergency rooms in the past 12 months.

Table 4 shows the primary problem substance for which club drug clients entered treatment. Sixty-four percent of club drug clients with a problem with methamphetamine actually had a primary problem with that drug, and another 12% had a primary problem with alcohol. In comparison, only 17% of those who used a hallucinogen reported hallucinogens as their primary drug. Marijuana was the primary drug problem for 42% of those who reported secondary or tertiary use of hallucinogens, for 43% of those with problems with Rohypnol, and for 31% of those with problems with ecstasy, while 26% of clients with problems with GHB had a primary problem with methamphetamine. (These two drugs are often used in combination: methamphetamine is used to stay awake while taking GHB, and GHB can be used to come down from a "speed" binge).

Table 4 also shows the number of days in which the club drug was used in the month prior to admission. GHB clients reported using GHB on 17 days, while ecstasy and hallucinogen clients reported using an average of 8 days a month, which approximates weekend use.

Table 5 shows the modality/environment into which the clients were admitted. Although a client's choice of program type may be limited since not all modalities and environments are available in all locations, this table does show patterns of service utilization.

Table 4

Primary drug of abuse of clients entering TCADA treatment programs with a problem with a club drug: 1/1/88–12/31/03

	Ecstasy (%)	GHB (%)	Hallucinogens (%)	Methamphetamine (%)	Rohypnol (%)
Club drug as primary drug ^a	20	26	17	64	18
Other primary drug ^b					
Marijuana	31	11	42	8	43
Alcohol	14	6	18	12	9
Methamphetamine	7	26	5		1
Powder cocaine	13	7	8	8	13
Crack cocaine	8	12	6	5	5
Heroin	1	4	2	2	9
# Days used primary club drug in month before admission	7.9	17.4	7.5	11.5	9.7

^a% of club drug admissions whose primary “drug of abuse” is a club drug (example: of those with any problem with ecstasy, ecstasy was the primary problem for 20%).

^bPrimary “drug of abuse” is nonclub drug. (example: of those who had any problem with ecstasy, marijuana was the primary “drug of abuse” for 31%).

Methamphetamine clients were fairly equally distributed among detoxification, residential, and outpatient services, while GHB, ecstasy, and hallucinogen clients were more likely to enter residential services and Rohypnol clients were more likely to enter outpatient services.

DSM-IV diagnoses were reported only by programs who had staff trained to perform the diagnosis, and although only a minority of clients received a DSM diagnosis, the diagnoses offer additional insight into the effects of the use of club drugs and other drugs (Table 6). For those clients who did receive a nondrug DSM diagnosis, depressive disorders were the most common ones for GHB, ecstasy, and methamphetamine clients, while conduct disorder was the most common for hallucinogen and Rohypnol clients.

Table 5

Modality/environment at admission to TCADA-funded programs with a primary, secondary, or tertiary problem with a club drug: 1/1/88–12/31/03

	Detoxification (%)	Residential (%)	Outpatient drug-free (%)	Outpatient methadone (%)
Ecstasy	13	45	37	0
GHB	11	53	28	5
Hallucinogens	15	41	42	0
Methamphetamine	35	30	31	1
Rohypnol	18	30	51	1

Table 6

DSM-IV non-substance-related diagnoses reported on clients at admission with a primary, secondary, or tertiary problem with a club drug: 1/1/88–12/31/03

	Ecstasy	GHB	Halluci- nogens	Metham- phetamine	Rohypnol	No club drugs
# Clients receiving DSM assessment	717	38	2,332	9,457	742	108,731
DSM IV non-substance diagnosis ^a						
% Bi-Polar Axis I, II disorder	4.6	5.3	1.6	3.7	0.3	1.9
% Depressive disorder (major or not specified)	9.2	13.2	5.5	6.1	0.9	4.9
% Conduct disorder	3.4	0.0	9.7	0.7	6.3	1.1
% No DSM diagnosis or no condition on Axis I, II	70.6	71.1	64.3	77.7	79.7	78.2
# Clients in programs that did not use the DSM	1,239	47	4,784	17,872	1,023	241,313

^aOther diagnostic categories were <1% each.

Use of medications such as antidepressants, benzodiazepines, or other psychotropic drugs is not common in TCADA programs, although use is increasing. In 1993, only 11% of all the adult club drug clients were placed on any of these medications at admission, whereas in 2003, 21% were on medication. Of the medications prescribed at admission, antidepressants were most common. They were prescribed for 15% of adult clients entering with problems with GHB and for 7% of methamphetamine clients. Antianxiety medication was prescribed for 8% of entering adult methamphetamine clients.

Discharge Characteristics. Status at discharge varied among users of the different drugs (Table 2). GHB clients were the most likely to complete treatment and hallucinogen clients were the least likely. Yet the length of stay for hallucinogen clients who completed treatment was longer than for any other group. These clients appear to be a difficult set of clients to treat. Even with their longer treatment stays, they were less likely to have attended 12-step meetings or been abstinent during the last 30 days of treatment. Methamphetamine clients had the shortest length of stay and attended more 12-step meetings in their last month of treatment month, but they were not likely to be abstinent in that last month. Their completion rate was also lower. In comparison, a high percentage of Rohypnol users completed treatment and they were the most likely to have been abstinent in the last month of treatment (which may be due to their oversight by the criminal justice system). However, their participation in 12-step meetings was the lowest of the groups and they were the least likely to receive antidepressant medications. Hallucinogen clients were the least likely to receive antianxiety drugs during treatment.

Follow-Up Characteristics. Hallucinogen users or their families were more likely to be contacted, while methamphetamine clients were the least likely (Table 3). As compared

to the other club drug clients, methamphetamine clients were a very impaired group of clients, with more days of problems on the ASI indices at admission and at follow-up for all categories. Methamphetamine users also tended to report more days of use of their secondary and tertiary problem drugs at both admission and follow-up.

Comparison of the ASI scores at admission in Tables 1 and 3 shows that those clients who stayed in treatment and were contacted at follow-up were less impaired at admission than those who were lost to follow-up.

Discussion

This Texas client dataset only reflects the characteristics of low-income clients admitted to publicly funded treatment, so the findings from this paper cannot be generalized to more affluent populations. However, these data counter perceptions that club drugs are “benign” and do not result in serious problems. The comparisons between club drug and nonclub drug clients in this dataset show that the problems reported by club drug users at admission and follow-up are of comparable severity with those reported by users of alcohol and other drugs such as cocaine and heroin.

The Texas data have also shown that users of the various club drugs are very different from each other. Knowing the type of club drug used may be a useful marker to point toward more targeted clinical assessments, treatment planning, and outreach needs. Clearly, some club drugs are associated with more problematic patterns of use, and treatment engagement and outcomes tend to vary by drug type.

At admission, ecstasy clients reported weekend drug use, and while 45% reported that marijuana or alcohol was their primary problem, 21% reported powder or crack cocaine and 7% reported methamphetamines as their primary problem drugs. Clinicians should be knowledgeable of and prepared to provide treatment for these very different combinations.

In addition, ecstasy use has spread beyond the club culture into the community, as shown by the increasing proportions of persons of color entering treatment, and treatment services should be revised to be culturally relevant. Clients who used ecstasy were more likely at admission to enter residential programs, but only 39% completed treatment even though they had a longer length of stay. Nine percent had received a DSM diagnosis of depression (either major depressive disorder or depressive disorder not specified), and 5% received antidepressants. Given the relationship between use of ecstasy and depression and other psychological problems as cited in the literature (Maxwell, 2003, 2005), it would seem that more clients should be assessed for depression, and wider use of antidepressant medications should be evaluated. In addition, the research findings about impaired concentration indicate that treatment techniques used for individuals with cognitive disabilities would be appropriate in some cases (Center for Substance Abuse Treatment, 1994).

The GHB clients present a mixed picture of severe problems and good response to treatment. These clients were older, were self-referred, had more emergency room and hospital visits in the year prior to admission, were placed on medications at admission, had a DSM diagnosis of a depressive disorder, and had lower rates of drug usage at follow-up. They used GHB in combination with methamphetamine or crack or powder cocaine, and they used GHB on more days in the month prior to admission than other clients used other club drugs. They were most likely to have been treated in residential settings. Yet even with these problems, GHB clients were likely to complete treatment. They had high rates of attendance at 12-step meetings and they were likely to be abstinent in their last month of

treatment. The fact that only 4% of these clients were married may be a reflection of use by gay and bisexual men, a trend noted elsewhere (Mansergh et al., 2001), and clinicians should be prepared to deal with high-risk sexual behaviors as well as to alert any HIV-seropositive patients of the potential problems of using GHB while on antiretroviral therapy (Romanelli, Smith, and Pomeroy, 2003).

Clients with problems with hallucinogens were young, although the average age at admission has been increasing and the proportion that is White is decreasing. They used hallucinogens on the weekends, primarily in combination with marijuana or alcohol. They were equally likely to be treated in residential or outpatient settings and they stayed in treatment longer than other club drug clients. During the last month of treatment, hallucinogen clients were less likely to be abstinent or to attend 12-step meetings, and they were less likely to complete treatment. Among those contacted at follow-up, the days of drug use and ASI problems both at admission and follow-up were lower than for other club drug clients. Of those clients who received a DSM diagnosis, conduct disorder was the most common, but few had a medication prescribed for them. Clinicians should be prepared to confront and treat conduct disorders among this population.

Persons with problems with Rohypnol were the youngest at admission, were predominantly Hispanic, male, lived on the border, and had criminal justice or legal problems. Forty-three percent had a primary problem with marijuana. Others had problems with powder cocaine and heroin. Rohypnol clients were more likely to be admitted to outpatient services. If they received a DSM diagnosis, it was most often conduct disorder. Other studies have reported on violent behavior among juvenile delinquent populations who were using flunitrazepam (Daderman et al., 2002; Daderman and Edman, 2001), and these findings may also be related to the high proportion of Texas admissions who had criminal justice or legal problems and the conduct disorder diagnoses for this group of clients.

Persons who inhaled, injected, or smoked methamphetamine were the oldest, the most likely to be White, and the most likely to inject drugs. In Texas, the increase in the number of recent admissions of methamphetamine clients shows that the methamphetamine epidemic that started on the West Coast has arrived in Texas, and a second epidemic of smoking Ice is also occurring. Unlike other clients, methamphetamine clients were more likely to have entered detoxification programs (35%). Their need for detoxification is also shown in the fact that 23% received medications during treatment. They were more likely to be on antidepressants or antianxiety medications at discharge, but they were not likely to be abstinent in their last month of treatment and their completion rate was low. At 90-day follow-up, they differed from other club drug users on all measures, continuing to report the patterns seen at admission in terms of the highest number of days of drug use and problems as measured by the ASI.

Of special concern with the club drug clients seen in this dataset are the indications of co-occurring mental health problems. Many drug treatment programs in Texas do not perform or report psychiatric diagnoses, but even with this underreporting, there are implications both from these treatment data and from the research literature cited earlier that some users of club drugs may be in need of both mental health and substance dependence treatment. Treatment assessments and protocols should encompass the needs of persons with co-occurring disorders (Center for Substance Abuse Treatment, 1994) or with cognitive disabilities and the use of appropriate medications.

This paper is a first attempt to look at the characteristics of persons admitted to treatment manifesting problems with club drugs. The research findings on the effects of these drugs

on the brain and the presence of co-occurring mental conditions need to be translated into clinical practice. Treatment staff need education on the differences in each of the club or party drugs and their physiological and psychological effects, as well as knowledge of the patterns of use in terms of changing demographics, combinations of drugs, and risky behaviors. There is a need for in-depth screening for problems associated with the use of club drugs and diagnosis of mental problems, which can occur with the use of these drugs.

Research is needed on specific interventions and treatment services for these groups of users. The different club drugs appear to be associated with distinctly different problems and dependency trajectories, as well as variations in treatment response. Future investigations should endeavor to develop more detailed understanding of the interactions of specific club drugs with other disorders and the implications for these interactions for treatment planning and long-term recovery.

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RESUMEN

Hay poca literatura sobre el tratamiento de personas con problemas de drogas “club.” Este artículo hablara sobre las características de individuos que entran en tratamientos por mostrar primer, segundo, o tercer nivel problemático con drogas como el éxtasis, el gamma hydroxy butgrate (GHB), la ketamina, el flunitrazepam (Rohypnol), la methamfetamina, y alucinantes (e.g. la LSD) en programas con recursos de la Comisión de Alcohol y Drogas de Tejas. Entre 1988 a 2003, unos 38,350 documentos sobre personas con problemas de drogas club fueron comparados con usuarios de alcohol o otras drogas. Usuarios de drogas club demostraron más posibilidad de tener problemas con cinco de seis Severo Adicción Indices (SAI) al entrar en tratamientos y hay más reiso de que usen drogas y alcohol con más frecuencia. Es más posible de que cumplen tratamientos pero esto depende en la clase de droga que usen. Noventa días después del tratamiento, los usuarios continuaron tener problemas con SAI. Los usuarios han demostrado que el uso del éxtasis no solo se encuentra en los clubes como indica el cambio de la demografía con el pase del tiempo. Aunque usuarios de el GHB han tenido problemas serios al entrar en tratamiento, ellos responden favorable durante el tratamiento. Usuarios de los alucinantes son más jóvenes pero son menos probables de cumplir el tratamiento. Usuarios de el rohypnol se encuentran el la frontera de Tejas con Mexico. La epidemia methamfetamina ha tenido más personas entrar en tratamiento y la poporción de fumadores de “hielo” ha crecido. Los usuarios de la methamfetamina cumplen su tratamiento con menos posibilidad pero el reiso de tener problemas al entrar y seguir en tratamiento es más probable. Una nota especial son las indicaciones de problemas concurrentes y la necesidad de tener salud mental y tratamiento para toxicomanía.

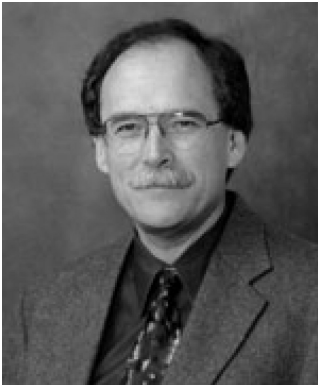
RESUMÉ

Il y a une carence de littérature concernant le traitement des personnes ayant des problèmes avec les pilules de fêtes ou drogues de synthèse ("club drugs"). Cet article examine les caractéristiques des individus admis au traitement pour un problème primaire, secondaire ou tertiaire avec les pilules de fêtes, telles comme l'ecstasy, le gamma-hydroxybutyrate (GHB), la kétamine, le flunitrazepam (Rohypnol), la méthamphétamine et les hallucinogènes (comme le LSD) dans les programmes recevant des fonds publics gérés par la Texas Commission on Alcohol and Drug Abuse. On compare quelques 38,350 dossiers uniques datant des années 1988 jusqu'à 2003 de personnes admises pour problèmes avec les pilules-fêtes nommées ci-dessus contre ceux des usagers d'alcool ou d'autres drogues. Au moment de leur admission au programme, les usagers de pilules-fêtes étaient plus diminués relatifs à cinq des six indices de l'Addiction Severity Index (ASI), et ils étaient plus disposés à la poly-toxicomanie. Comparés aux usagers d'autres drogues, ils étaient plus aptes à compléter le traitement, mais ce résultat variait selon la drogue. Suivis 90 jours après leur congé du traitement, ces clients continuaient à manifester un excès de symptômes selon l'ASI. Le changement du profil démographique de ces clientes au cours des années montre que l'usage de l'ecstasy s'est répandu maintenant au-delà du contexte des clubs. D'autres différences selon la drogue étaient en évidence. Les clients admis pour abus du GHB avaient à la fois des problèmes plus sévères à l'entrée au traitement et une réponse au traitement parmi les plus favorables. Les clients admis à cause de l'usage d'hallucinogènes étaient jeunes et moins aptes à compléter le traitement, tandis que les usagers de Rohypnol résidaient, pour la plupart, sur la frontière Texas-Mexique. L'épidémie d'abus de la méthamphétamine a mené à une hausse des entrées au traitement, ainsi qu'une augmentation dans la proportion parmi eux de fumeurs de "Ice." Cependant, les clients admis pour un problème avec la méthamphétamine étaient moins disposés à compléter le traitement, et avaient un niveau plus élevé de problèmes à l'entrée ainsi qu'au suivi, ce qui est cause d'inquiétude. A noter sont les indications de problèmes concomitants pour certains clients, ce qui suggère un besoin de traitement également pour la santé mentale comme pour la dépendance de la drogue.

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Glossary

Anhedonia. Loss of the capacity to experience pleasure.

Cognitive-behavioral therapy. Cognitive therapy focuses on present thinking, behavior, and communication rather than on past experiences and is oriented toward problem solving.

DSM-IV. Diagnostic and Statistical Manual, 4th edition, which is the diagnostic criteria of psychiatric disorders published by the American Psychiatric Association.

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