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Prevalence of Alcohol and Drug Use in an Adolescent Training Facility

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Abstract

This study investigates substance use and crimes among incarcerated adolescents. Chart reviews were conducted between 1997–2000 with 186 adolescent, male offenders, including information on demographics, substance use, and crimes. Results indicate that use of alcohol (88.7%) and marijuana (95.7%) was highly prevalent. The most widely committed crimes included possession of a controlled substance (31.8%), receiving stolen goods (17.8%), and violation of probation (17.2%). Significant differences were observed across racial/ethnic groups; White nonHispanic adolescents were more likely to use cocaine, hallucinogens, and heroin than adolescents of other races. Future research examining relationships between criminal behavior, substance use, and cultural variations in use patterns and delinquency will allow more relevant intervention and prevention strategies in this population.

INTRODUCTION

Research with adults has identified a strong association between drug use and crime (Wish and Johnson, 1986) with the prevalence of drug use among adults who have been arrested increasing in the last decade (Wish, 1987). Based on national survey data of adults, early age at onset of alcohol use is related to a greater likelihood of developing alcohol dependence, patterns of frequent heavy drinking, unintentional injury under the influence of alcohol, and being in a physical fight after drinking (Hingson et al., 2000; Grant and Dawson, 1997). In 1999, of the over 2 million adolescent arrests, 408,800 (17%) were for drug-related crimes (i.e., drug abuse, DUI, drunkenness, and liquor law violations) and the juvenile justice system costs the U.S. government approximately \$1 billion annually (Patterson, 1989).

Substance abuse is a prevalent problem in incarcerated youth. Farrow and French (1986) reported that 81% of a sample of 91 incarcerated youths admitted to some substance abuse during the six months prior to incarceration. Rates of those who used substances on a daily basis were as follows: tobacco, 76%; cocaine, 8%; hallucinogens, 4.4%; amphetamines, 19%; marijuana, 50%; barbiturates, 12%; and alcohol, 28%. Neighbors et al. (1992) reported that 47% of a sample of 111 incarcerated youths met criteria for a diagnosis of alcohol or substance abuse or dependence. Of those diagnosed, 44% were diagnosed as manifesting alcohol abuse or dependence, alone or in conjunction with marijuana use or dependence. These data are similar to those of McManus et al. (1984) who studied 71 incarcerated youth and found that 28% had a diagnosis of alcohol abuse or dependence and 44% had a

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diagnosis of cannabis abuse. The National Institute of Justice (1997) compiled data from 12 U.S. cities on adolescents aged 9–18 indicating that more offenses of every type (violent, property, and drug) were committed by arrestees who tested positive for alcohol and marijuana.

The above studies indicate a critical public health concern and it is important to focus research on efforts that may reduce recidivism among adolescents. This research may examine the relationship between juvenile criminal behavior and drug use, and it may focus on prevention and intervention efforts. Such research on prevention and intervention may explore background characteristics that influence treatment needs (i.e., ethnic background) (Morse, 1993; Dembo et al., 1998).

This study examined alcohol and drug use in an adolescent training facility that houses, educates, and treats juvenile arrestees from diverse backgrounds. The purpose was to investigate and identify patterns of alcohol and drug use that are related to illegal activities and juvenile incarceration. We also explored the relationship between background characteristics, substance use, and illegal activity. In doing so, our aim is to expand the knowledge base regarding juvenile offenders.

METHOD

This study was completed through record reviews of clinical intake data. Originally, through structured interview and review of court data, training school staff collected intake and screening data with newly adjudicated adolescents (where available collaterals were also interviewed). These clinical assessments contained demographic data and data on alcohol and substance use. Substance abuse counselors collected all data. These professionals are licensed drug use counselors and social workers.

The initial sample consisted of 186 male adolescents, aged 13–22 years, who were adjudicated between January 1997 and January 2000. Among them, 170 adolescents were also enrolled in substance abuse treatment at the facility. The mean age for this sample ($n = 170$) was 17 years old ($SD = 1.9$). In this paper, ethnicity is defined by the perceptions that an individual holds regarding oneself that give the individual the feeling that one belongs to a group of people who share a certain history, region of origin, or culture (Richters, 2000). See Table 1 for ethnicity breakdown. Eighty percent of the adolescents indicated English as their primary language and 16.3% spoke Spanish.

For one set of analyses, alcohol and marijuana use were recorded on an 8-point Likert scale: *Do not use (1), Use less than monthly (2), Use monthly (3), Use 2–3 times a month (4), Use 1–2 times a week (5), Use 3–6 times a week (6), Use daily (7), and Use greater than 1 time per day (8)*. Illicit drug use was coded according to whether or not the teen had used any illicit drugs (yes/no), and frequency of illicit drug use: *Tried once (1), Used a few times (2), Used monthly (3), Used weekly (4), and Used daily (5)*. Next, the response options were collapsed. Alcohol and marijuana were coded as: *Less than once a month (1), Once per month to 1–2 times a week (2), and 3 or more times per week (3)*. Age of onset for alcohol use was collapsed into two groups: those who began drinking at age 12 or younger (early onset) and those who began drinking at age 13 or older (later onset). Age of onset for marijuana was also collapsed into: those who began using at age 13 or younger (early onset) and those who began using at age 14 or older (later onset). The age cutoffs were chosen based on the mean age of onset for both alcohol and marijuana use independently. Finally, as is consistent with the literature (Dembo et al., 1997), crimes were recoded into one of five categories: *drug-related crimes (1), theft (2), crimes against persons (3), property crimes*

(4), and general delinquency (i.e., missed curfew, missed violation of parole (VOP) hearing, and violation of home confinement) (5). Prior arrests were coded yes/no.

RESULTS

Among the 186 teens, there were nine that did not have their current reason for arrest on record. Of the remaining 177, the most widely committed crimes were drug-related (see Table 2). Twenty percent of the adolescents had been arrested previously and 50% of those previously arrested were rearrested for committing the same crime. For descriptives regarding alcohol use, drug use, and prior treatment, see Tables 3, 4, and 5. There were no significant associations between the frequency of alcohol use nor age of onset of alcohol use and reason for incarceration. Prior treatment experience and recidivism were not significantly related to age of onset of alcohol use. A significant relationship was found between alcohol use and prior arrest (see Table 6).

Reason for incarceration was significantly associated with age of onset of marijuana use ($\chi^2 = 40.5, 26, p < 0.05$). Adolescents who started using marijuana on or before age 13 were significantly more likely to be arrested for crimes involving theft or delinquency, while those who started after age 13 were more likely to be arrested for committing a crime against another person ($\chi^2 = 9.05 (1), p < 0.01$). Table 7 shows a significant relationship between frequency of marijuana use and age of onset. Frequency of marijuana use was not significantly related to reason for incarceration, prior treatment, or history of prior arrest. Also, adolescents with early onset of marijuana use were more likely to have had prior drug and/or alcohol treatment ($\chi^2 = 10.28 (1), p < 0.001$).

Ethnic Differences

Significant differences were observed across ethnic groups, in that White nonHispanic adolescents were more likely to use cocaine ($\chi^2(24) = 37.1, p < 0.05$), hallucinogens ($\chi^2(18) = 30.9, p < 0.01$), and heroin ($\chi^2(10) = 20.4, p < 0.005$) than adolescents of other ethnicities. However, Hispanic adolescents as well as White nonHispanic adolescents were significantly more likely to be arrested on a drug-related charge than were adolescents of other ethnicities ($\chi^2(1) = 12.77, p < 0.001, \chi^2(1) = 6.97, p < 0.01$). White adolescents were also significantly more likely to be arrested for a delinquency charge than adolescents of other ethnicities ($\chi^2(1) = 8.05, p < 0.01$).

DISCUSSION

Through comprehensive record review, we determined that over half of the incarcerated adolescents in our sample reported regular use of alcohol, marijuana, and/or other illegal drugs. Those who started using marijuana at or before the age of 13 used marijuana more often and were more likely to have had treatment than those who began using after age 13. Additionally, early onset of marijuana use was related to reason for incarceration (theft/delinquency). Similar to research by Dembo et al. (1997), 20% of this sample had been arrested previously and had comparable rates of delinquency. Drug-related arrests accounted for 30% of arrests in this sample, which is higher than noted in other studies (Hollin, 1983). This difference is likely due to sampling differences in that the current study sample was comprised of incarcerated juveniles in substance-abuse treatment. Consistent with the findings of Hollin (1983), we found no relationship between alcohol use and reason for incarceration but did find that heavy alcohol users had more previous convictions. This strongly suggests the need for early and more intensive screening and intervention with at-risk adolescents, which might serve to reduce crime and avoid incarceration.

A limitation of this study is that it examined a small number of incarcerated adolescents and did not include female adolescents. Second, the study relied on the adolescents' reports of their own substance use. This is subject to the biases normally associated with self-report of potentially sensitive information. Finally, due to the measures used by the substance-abuse department at the training school, some variables needed to be recoded or dichotomized, which reduced the power to detect significant differences.

Future research may study longitudinally the relationship between substance use and criminal activity among juveniles. Such a study would be useful in identifying the multidimensional relationships between drug use and crimes committed. Replication of ethnic differences found here could also pave the way for advances in intervention with this diverse population. Issues of acculturation may also be a factor and should be explored in future studies. We were unable to explore acculturation in this study since the study was archival and data pertaining to acculturation were not collected. Finally, future studies may collect larger samples of adolescent drug users who are using harder drugs such as heroin or cocaine. Such samples will allow more detailed analysis of the impact of these substances.

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Biographies

Rebecca Lebeau-Craven received her M.P.H. at Boston University in 2000 and is currently a Project Coordinator at the Center for Alcohol and Addiction Studies at Brown University coordinating two projects that investigate the use of brief intervention of alcohol use with young adults. She has been at the Center since 1996.

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Dr. Suzanne Colby received her doctorate in 1996 from the University of Rhode Island. Currently she is an Assistant Professor at the Center for Alcohol & Addiction Studies at Brown University. She conducts research on the affects of nicotine withdrawal in adolescents as well as brief interventions for adolescent smokers.

Joe Smith, L.C.D.P., C.A.S., P.C.S., is a Program Director for Phoenix House, a program located at the RI Training School since October 1993. He has been in the human service field for 19 years and in the substance abuse field for 15 years.

Anna L. Canto, C.D.P., received her Associates in Fine Arts in Mental Health. She is currently senior substance abuse counselor at the RI Training School. She has been in substance abuse for seven years, including substance abuse education, prevention, intervention, and therapeutic counseling.

Table 1

Ethnic breakdown (N = 186).

Ethnicity	Percent
Hispanic	38.1
White	37.6
Black	19.3
Asian	2.2
Native American	1.1
Biracial	1.7

Table 2

Reason for most recent incarceration.

Crime committed	Percent
Possession/delivery of a controlled substance	34.4
General delinquency	25.8
Theft	16.7
Crimes against persons	11.8
Property crimes	6.5

Table 3

Alcohol and marijuana use frequencies and age of onset by drug type.

	Mean age of onset	Daily use	Monthly-weekly use	Current use
Alcohol	12.3	15.1	84.9	88.7
Marijuana	12.7	54	46	95.7

Table 4

Illicit drug use frequencies by age of onset.

Drug use and frequencies	Mean age of onset	Percent who use
Crack	15.0	13.9
Cocaine	15.3	9.1
Opiates	16.2	10.8
Stimulants	15.0	5.4
Ecstasy	17.0	2.5
Benzodiazapines	15.4	7.5
Hallucinogens	15.0	32.2
Over-the-counter drugs	14.5	7.0
Prescription drugs	14.8	1.0
Inhalants	13.4	13.9

Table 5

Treatment attendance prior to current incarceration.

Treatment	Percent who attended
Alcoholics Anonymous	42.4
Narcotics Anonymous	51.6

Table 6

Relationship between alcohol use and prior arrests.

Alcohol use	No previous arrest	Previous arrest
Less than monthly	29 (48.3%)	9 (25.7%)
Once per month to 1–2 times per week	19 (31.7%)	8 (22.9%)
3 + times per week	12 (20.0%)	18 (51.4%) ^a

^a($\chi^2 = 5.9$ (2), $p < 0.05$).

Table 7

Marijuana use by age of onset.

	≤13 years	> 13 years
Occasional use	15 (12.3%)	19 (27.5%)
Monthly–weekly use	10 (8.2%)	11 (15.9%)
Daily use	97 (79.5%) ^a	39 (56.5%)

^a($\chi^2 = 11.7$ (2), $p < 0.01$).