

Predictors of Treatment Contact Among Individuals with Cannabis Dependence

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ABSTRACT

Epidemiological studies have repeatedly shown that cannabis is the most commonly used illegal drug in the United States. Furthermore, individuals with cannabis dependence have high rates of comorbid substance use disorders and depression. A significant proportion of individuals with addictive disorders develop withdrawal symptoms, cannot control their drug use despite substantial adverse psychosocial consequences, and frequently have a coexisting psychiatric disorder. Nevertheless, only a minority of persons with cannabis dependence ever seek treatment. We were unable to locate epidemiological reports regarding treatment seeking behavior among persons with cannabis dependence. Epidemiological studies of populations with substance disorders have observed that employment, higher educational level, previous use of treatment, major depression, and a co-occurring substance dependency increased the probability of seeking treatment

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for alcohol dependence. Thus we hypothesized that the same variables would predict service use among persons with cannabis dependence. The main findings of this study were that persons with cannabis dependence were more likely to contact a professional during the past year if they previously sought treatment and had alcohol dependence with major depression. Prospective, longitudinal studies of adolescents would increase our understanding of the processes by which individuals identify themselves as having problems related to their habitual use of marijuana, and why some seek help while others do not.

Key Words: Cannabis dependence; Service utilization; Comorbidity.

INTRODUCTION

Epidemiological studies have repeatedly shown that cannabis is the most commonly used illegal drug in the United States (1–3). The National Comorbidity Survey observed that approximately 4% of the population had cannabis dependence (3). Furthermore, individuals with cannabis dependence have high rates of comorbid substance use disorders and depression. The National Longitudinal Alcohol Epidemiologic Survey observed that 63% had alcohol dependence; 28% had another drug use disorder (28%), and 29% had major depression during the past year.

Though the consequences of marijuana use is considered by some to be benign (4), prolonged cannabis use may have adverse consequences on cognitive functioning. In a literature review, early adolescent marijuana use was a risk factor for poor educational outcomes, and in particular, early school leaving and reduced educational attainment. Heavy cannabis users appear to have impairments in mental flexibility and abstraction along with other learning difficulties (5,6).

A significant proportion of individuals with addictive disorders develop withdrawal symptoms, cannot control their drug use despite substantial adverse psychosocial consequences, and frequently have a coexisting psychiatric disorder. Nevertheless, only a minority of persons with cannabis dependence ever seek treatment (7).

Epidemiological studies of populations with substance disorders have observed several correlates of treatment seeking behavior. Among persons with alcohol abuse/dependence disorders, psychiatric comorbidity was a stronger predictor of treatment contact than alcohol disorder alone (8). Kessler et al. (7) found the earlier the onset of substance dependence disorder, the less likely treatment was sought. We were unable to locate epidemiological reports regarding treatment seeking behavior among persons with cannabis dependence.



Grant (9) hypothesized that treatment seeking among alcohol-dependent populations was influenced by the following enabling factors: 1) individual and community resources that permit access to treatment services, e.g., income, health insurance; 2) severity of substance dependence and comorbidity; 3) predisposing factors that increase the likelihood seeking treatment, e.g., past use of treatment.

Employment, higher educational level, previous use of treatment, major depression, and a co-occurring substance dependency increased the probability of seeking treatment for alcohol dependence (9). Thus, we hypothesized that the same variables would predict service use among persons with cannabis dependence.

METHODS

Sample

These data were downloaded from the National Comorbidity Survey (NCS) database (see the NCS homepage at www.hcv.harvard.med.edu). The NCS was designed to measure the prevalence of DSM-III-R disorders as well as to examine risk factors for psychiatric disorders in a nationally representative sample. The NCS was based on a national probability sample of individuals 15 to 54 years of age in the noninstitutionalized population of the United States. The NCS had two phases: a part 1 diagnostic interview (N = 8098) and a part 2 risk factor interview administered to a subsample (N = 5877) because of budgetary constraints. The part 2 interview was administered to all part 1 subjects aged 15–24 years, to all other subjects in part 1 with a lifetime diagnosis, and to a random subsample of the remaining subjects in part 1. For more detailed information see Kessler et al. (3).

The prevalence data were weighted for differential probabilities of selection and nonresponse. A weight was also included to adjust the sample to approximate the cross-classification of the population distribution on a range of sociodemographic characteristics. Bivariate comorbidities were obtained by estimating odds ratios using the SYTAB procedure in the STATA 7.0 for Windows software package (10).

Diagnostic Assessment

Psychiatric diagnoses were based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-3R) (13). The diagnostic interview used to generate these diagnoses is a modified version of the Composite



International Diagnostic Interview (11), designed to be used by trained interviewers who are not clinicians.

Treatment Contact

Respondents were queried whether they ever told a medical doctor other than a psychiatrist, a mental health professional (defined as a psychiatrist, psychologist, or social worker), or any other professional (defined as a nurse, minister, priest, or counselor) about emotional and/or substance use problems.

Data Analyses

Because of the complex survey design, variance estimation procedures that assume a simple random sample could not be used. Standard errors (SE) and the use of linear logistic regression analyses were generated using STATA (10), a software program that adjusts for these sample design characteristics.

A logistic regression analysis was conducted to determine the association between service use, cannabis dependence severity, and predisposing or enabling factors among respondents with cannabis dependence during the past year. Following the method recommended by Hosmer and Lemeshow (12), all variables with a statistical probability < 0.25 in the bivariate analyses were included as main effects. Backward selection procedures were conducted to identify unique predictors (i.e., variables that remained significant when controlling for other variables in the model).

RESULTS

Among individuals with cannabis dependence, 29% sought treatment during the past year. Being single, failing to graduate high school, past treatment, major depression (past year), and past service use were factors that were positively associated with help seeking behavior (Table 1).

Variables that were statistically significant at the 0.25 level in the bivariate analyses were included in the initial logistic regression analysis. The independent variables included major depression, alcohol dependence, past treatment, marital status, medical insurance, education, and terms representing the interaction effects between each of these variables. The final model retained past treatment (Beta = -0.898 , SE = 0.34 , Odds Ratio = 2.6 , 95% C.I. = $0.91-3.1$) and major depression by alcohol



Treatment Contact Among Cannabis Dependent Individuals

Table 1. Significant associations between current service use with predisposing, enabling, and illness severity factors.

Factor	No contact (N = 48)		Contact (N = 20)		P
<i>Marital status</i>					
Married	49.5	9.0	20.9	9.4	
Unmarried	50.6	9.0	79.1	9.4	0.04
<i>Education</i>					
Less than high school	52	0.09	82.9	0.08	
High school and beyond	48	0.09	17.1	0.08	0.02
<i>Past service use</i>					
Yes	93	4.1	56	10.1	
No	7	4.1	44	10.1	0.008
<i>Major depression (past year)</i>					
No	86.9	5.3	43.5	13.9	
Yes	13.1	5.3	56.5	13.9	0.002

dependence (Beta = -1.39, SE = 0.34, Odds Ratio = 1.8, 95% C.I. = 0.46–2.6) as significant predictor variables.

DISCUSSION

The main findings of this study were that persons with cannabis dependence were more likely to contact a professional if they previously sought treatment or had alcohol dependence with major depression.

The combination of alcohol dependence and major depression, rather than either alone, predicted treatment contact. We posit that having two substance dependencies (alcohol and cannabis) and being depressed may have engendered sufficient psychic turmoil that increased their motivation to seek professional help. Studies have also found that major depression increased the likelihood of treatment seeking among substance-dependent populations (9,13,14), lending partial support to our findings.

Our observation that past treatment predicted past year service contact was also observed among alcohol-dependent populations. Interestingly, past treatment was found to be predictive of current help-seeking only for subjects who graduated from high school and were employed (9). Unfortunately, we were unable to validly test for this interaction because our sample size was too small.

We were surprised to find that severity of marijuana dependence was not associated with seeking treatment, because severity has been found to

predict service use among individuals with alcohol disorders (9). A possible reason for this discrepancy is that our study's relatively small sample lacked sufficient power to detect this association.

Prospective, longitudinal studies of adolescents would increase our understanding of the processes by which individuals identify themselves as having problems related to their habitual use of marijuana, and why some seek help while others do not.

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