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Does Taking Steps to Control One's Drug Use Predict Entry into Treatment?

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Abstract

Background—Treatment readiness has been shown to predict entry and success in drug treatment programs.

Objective—To examine the association between treatment readiness (defined as engaging in activities to control one's drug use) and enrolling in drug treatment.

Methods—Longitudinal data collected through face-to-face interviews (March 2004–February 2007, NIDA-funded) from 585 injectors in Baltimore were analyzed.

Results—Avoiding buying drugs and drug-related people and places were associated with entering treatment at follow-up. Also, the more activities one engaged in, the greater likelihood of entering drug treatment.

Conclusions & Scientific Significance—These findings suggest that practicing behaviors to control one's drug use may be a beneficial strategy for getting ready for treatment.

Keywords

drug treatment; treatment readiness; avoidance; injectors; drug use; natural recovery

Introduction

Treatment is an important component of recovery from alcohol or other drug (AOD) misuse and dependence. Only 4 million of the estimated 22.6 million Americans aged 12 or older with AOD abuse or addiction problems receive treatment (1). Identifying behavioral strategies to facilitate AOD treatment entry may help to reduce this discrepancy.

Entry into AOD treatment is associated with several intrapersonal factors such as severity of alcohol abuse symptoms, pressure from family and friends, prior treatment episodes, and the negative social consequences from alcohol abuse (2). Several researchers have also found that treatment-seeking behavior and avoiding people who used drugs is associated with entry into AOD treatment (3–5).

Readiness for treatment has been shown to be an important factor in predicting treatment retention, participation, and engagement (6–8). Readiness for treatment has been defined as the level of commitment to reduce AOD use through participation in treatment (6,9). Another definition of treatment readiness is based upon one's perception of needing treatment in order to change one's behavior (10). Bluthenthal measured readiness for treatment based on where

an individual classified themselves on a 9-point scale of personal awareness, desire, and decision-making and how this relates to changing one's drug use (11). Other researchers conceptualized treatment readiness as the interaction between personal and social factors, problem recognition, and desire for help (12). As shown by these examples, readiness for treatment has traditionally been defined as a cognitive or intrapersonal construct, such as ones' beliefs and intentions.

We contend that readiness for treatment is a multidimensional construct, which needs to be assessed through behavioral actions. One key behavioral factor in this multidimensional construct is the strategies people employ to control their AOD use.

Strategies used by drug users to control their drug use have been examined in studies of natural recovery. Natural recovery, or spontaneous remission, is when an AOD user stops using without treatment (13). The process of natural recovery from opiate addiction is often done in a stepwise fashion, much like how the stages of change model is described (14). Furthermore, natural recovery is an area of research that consists of dynamic processes and needs further research to be understood completely (15).

Although some gaps in research about natural recovery still remain, some research has shown that people who recover naturally often adopt or formulate behavioral strategies to overcome their use of drugs or alcohol (16). Some examples of these strategies include: 1) adopting alternative activities to drug use (such as religion, education, reading and writing, and employment), 2) forming new or closer relationships with nonusers, and 3) avoiding drugs or alcohol (16). Additionally, in an analysis of people who spontaneously recovered from cocaine dependence, researchers showed that improved self-concept, change of friends, change in social life, increase in social support, change of address, and change in job were the most important factors in maintaining abstinence from cocaine (17). Klingemann showed that spontaneously recovered alcohol and heroin users employed behavioral strategies such as distancing oneself from situations, places, and friends where drugs were used (18). Just as these behaviors may persuade a person to cease their substance use, they may also motivate them to seek drug treatment.

We conducted a longitudinal analysis of the associations between behaviors done to control drug use at baseline and entry into AOD treatment at follow-up. We hypothesized that the intention to end drug use, operationalized as doing something to control one's drug use would facilitate entry into drug treatment. We sought to determine which behaviors predicted subsequent entry into drug treatment. In addition, we examined the association between people who employed multiple strategies and drug treatment to determine if there is a gradient factor. Identifying the behaviors that enable an individual to enter drug treatment is important to develop comprehensive treatment programs as well as for linking drug users to appropriate services.

Methods

Procedures

The sample was comprised of participants in the STEP into Action (STEP) program. The STEP program focused on HIV prevention among drug injectors and their social network members. Detailed descriptions of recruitment, inclusion criteria, and study protocols have been reported previously (19).

Baseline interviews from March 2004-March 2006. Follow-up interviews were conducted November 2004-February 2007. All participants were compensated with \$35 for completion

of the baseline and follow-up assessment. All protocols were approved by the Johns Hopkins Institutional Review Board prior to implementation.

Measures

Activities to control drug use—Based on formative qualitative research, at baseline, participants were asked about activities they had done to control their drug use in the past 6 months. Specifically, 9 non-treatment activities were inquired about and participants reported if they had done any of the activities in the past six months. The list of activities included: 1) Reduced frequency or amount of drugs; 2) Avoided buying drugs; 3) Avoided people or places who use drugs; 4) Spent time with family, friends, or children; 5) Went to church or prayed; 6) Hobbies; 7) Exercised or played sports; 8) Watched TV, movies, sports, or listened to music; and 9) Worked or volunteered. Participants were asked about each activity so categories are not mutually exclusive.

HIV Status—HIV status was assessed through collection of an oral specimen to test for HIV antibodies using the OraSure oral specimen collection device (OraSure Technologies, Inc.)

Enrollment in drug treatment—At baseline and follow-up assessments, participants were asked if they had been 1) on a methadone maintenance program; 2) attended a medication free treatment program; or 3) been in a residential drug treatment program in the past 6 months. Participants who reported an affirmative response to any of the 3 items were classified as “Received drug treatment in the past 6 months at follow-up”.

Data analysis

The sample for the present study was restricted to individuals who self-reported injecting heroin, cocaine, or speedball in the past 6 months at baseline and completed a follow-up assessment. Baseline data were collected from 824 injectors while follow-up assessments were conducted with 587 participants, which indicates 71% retention rate. The average time between baseline and follow-up assessments was 8.4 months. Participants did not complete follow-up assessments for a variety of reasons including death, incarceration, and unable to locate. Thus, the sample size for this study was 587 participants who completed both baseline and follow-up assessments.

Chi-square tests were computed to examine unadjusted differences in activities done to control drug use between individuals who received drug treatment by follow-up and individuals who were not receive drug treatment. Each activity that had at least a marginally significant relationship with being in drug treatment at follow-up was entered into a multivariate model. We also created a scale by summing the activities that were significant in the bivariate analyses. This model was computed to determine if individuals who engaged in multiple activities were more likely to enter drug treatment at follow-up. This scale had strong internal consistency (0.81).

Eight multivariate models were computed using drug treatment at follow-up as the dependent variable and each of the activities that were significant at the bivariate level, or the total score, as the main independent variable.

Results

Baseline characteristics of the sample are presented in Table 1. The mean age was 43.8 years (range: 22–64). The sample was primarily African American, male, and low socioeconomic background demonstrated by low income, education, and employment status. The majority of

participants (71.6%) reported previous history of drug treatment. The most common types of drug use were injecting heroin, injecting cocaine, and smoking crack.

As shown in Table 2, individuals who enrolled in drug treatment, compared to those who did not, were more likely to decrease the amount or frequency of drugs used, avoid buying drugs, avoid people or places, spend time with family or friends, go to church or pray, engage in hobbies, and use TV/movies/music.

As shown in Table 3,, after controlling for demographics and previous drug treatment history, only two specific activities were associated with enrolling in drug treatment in the past 6 months- avoiding buying drugs [AOR: 1.51, 95% CI: 1.07–2.14] and avoiding people or places [AOR: 1.54, 95% CI: 1.08–2.20]. Also, the activities scale was significant indicating that the more activities an individual did to control their drug use, the more likely they were to enter treatment [AOR: 1.10, 95% CI: 1.01–1.19]. There was a marginally significant association between engaging in hobbies and enrolling in drug treatment [AOR: 1.41, 95% CI: 0.99–2.00].

Discussion

In this longitudinal study, to identify which behaviors successfully used to control drug use, we found that individuals who reported avoiding other drug users or drug-related places as well as avoiding the purchase of drugs were more likely to enter drug treatment at follow-up.

Our finding that avoiding people is associated with entering drug treatment is supported by previous research (5) and suggests that limiting one's exposure to external drug-related cues and reducing drug use may be a successful strategy for treatment entry. Avoidance of drugs and drug-using friends parallel some of the activities that people who spontaneously recover from AOD abuse adopt to control their drug use (16). Further, studies demonstrate that avoidance of people or places where drugs are used helps recovering users to remain abstinent (20,21). Self-help groups, such as Alcoholics Anonymous and Narcotics Anonymous encourage participants to adopt similar avoidance coping strategies (22,23). Also, people that have been in treatment previously may learn strategies to sustain their abstinence and serve as substitutes for drug use. Our sample included a large percentage of people who had been exposed to self-help groups and prior drug treatment. This prior exposure may have influenced individuals to employ the behavioral strategies between treatment episodes so they could control their use.

Another possible explanation for the association between controlling drug use and drug treatment is the development of social relationships with supportive nonusers. Social networks and social norms can influence entry to drug treatment. Davey-Rothwell and colleagues showed that individuals who were part of a social network of frequent 12-step program participants were more likely to be frequent 12-step program attendants themselves than those who were not in such a network (24). In addition, individuals whose social network included people in drug treatment and fewer crack users were more likely to go to treatment themselves (25). By associating with individuals who do not use drugs or are in recovery, an individual may be motivated to change their own drug behaviors. Also, breaking or weakening social ties with drug users, may allow for "social space" leading to treatment entry.

We also found that with each additional activity that a person did to control their drug use; they had a 10% increased likelihood of entering into drug treatment. This finding suggests that each additional strategy may have an additive effect to bringing a person closer to being ready for drug treatment. It also means that individuals should be encouraged to try multiple strategies to control their drug use since different strategies may work at different times.

The study has several limitations. First, all data, except HIV status, were self-reported. Another limitation is that we do not have data on the frequency and degree of engagement in each activity. For instance, there may be differences in treatment entry between people who avoided buying drugs once in the past 6 months and someone who consistently avoided the purchase. We also do not have data on the amount of time spent in drug treatment. More research is needed to determine if taking steps to control one's drug use is associated with treatment retention and sustained abstinence. Finally, since our sample was comprised of self-selected injectors living in an urban setting, the generalizability of the study's findings is limited.

Our study demonstrated that taking initial steps to control their drug use predicted treatment entry. These findings suggest that individuals who are unable to get into drug treatment should be encouraged to try activities, such as staying away from external cues that may instigate drug use, to control their drug use in the meantime. These data also suggest that natural recovery is not an alternative to treatment; rather the two can be seen as complementary. Treatment programs should promote the successful methods, including staying away from people or places that are drug-related. By promoting non-treatment approaches that individuals in recovery may use after they leave treatment, relapse prevention will be less likely to occur.

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Table 1

Sample characteristics of STEP participants who injected drugs and completed both baseline and 6-month follow-up assessment (N=587).

Characteristic	n (%)
Age, Mean (SD)	43.8 (7.67)
Gender: Male	360 (61.2)
Race/ethnicity: African American	496 (84.4)
Education: High school diploma or higher	271 (46.1)
Income <\$500 in past 30 days	275 (47.1)
Employed at least part-time	89 (15.1)
Homelessness in past 6 months	212 (36.1)
HIV positive	67 (11.4)
Previous drug treatment (lifetime)	421 (71.6)
Injected cocaine in past 6 months	375 (63.8)
Injected heroin in past 6 months	538 (91.5)
Injected speedball in past 6 months	452 (76.9)
Smoked crack in past 6 months	391 (66.5)
Snorted heroin in past 6 months	278 (47.4)
Snorted cocaine in past 6 months	143 (24.4)

Table 2

Comparisons of activities done to control drug use among injectors who entered drug treatment and injectors who did not enter drug treatment.

Activity done to control drug use	Total Sample (n=587) ^a	In drug treatment at FU (n=274)	Not in drug treatment at FU (n=313)	χ^2 ^a
Decreased amount/frequency of drugs [*]	366 (62.7)	185 (67.5)	180 (57.5)	6.23
Avoided buying drugs ^{**}	282 (47.9)	150 (54.7)	132 (42.2)	9.25
Avoided people/places ^{**}	345 (58.7)	181 (66.1)	163 (52.1)	11.8
Spent time with family/friends [*]	405 (68.9)	202 (73.7)	203 (64.9)	5.37
Church/prayed [*]	413 (70.2)	204 (74.5)	208 (66.5)	4.47
Hobbies ^{**}	334 (56.8)	173 (63.1)	160 (51.1)	8.60
Exercise/sports	194 (32.9)	96 (35.0)	98 (31.3)	0.11
TV/movies/music [*]	415 (70.6)	205 (74.8)	210 (67.1)	4.21
Worked/Volunteered	208 (35.4)	99 (36.1)	109 (34.8)	0.11

^aCategories are not mutually exclusive

^bChi-square test statistic

^{*}p<.05

^{**}p<.01

Table 3

Multivariate regression models of the associations between activities done to control drug use and enrolling in drug treatment at follow-up.

Activity done to control drug use	Adjusted Odds Ratio	95% CI
Model I: Decrease amount/frequency	1.33	[0.93, 1.92]
Model II: Avoid buying drugs *	1.51	[1.07, 2.14]
Model III: Avoid people & places *	1.54	[1.08, 2.20]
Model IV: Spent time with family friends	1.30	[0.89, 1.92]
Model V: Prayed/went to church	1.19	[0.81, 1.75]
Model VI: Hobbies ⁺	1.41	[0.99, 2.00]
Model VII: Watched Movies/TV/Music	1.21	[0.83, 1.78]
Model VII: Activities Scale*	1.10	[1.01, 1.19]

All models controlled for gender, age, employment status, race, homelessness, and previous drug treatment history.

*
p<0.05

⁺
p<0.10