Published in final edited form as:
Am J Drug Alcohol Abuse. 2008 ; 34(6): 741–748. doi:10.1080/00952990802326272.

Readiness to Change as a Predictor of Drug-Related Behaviors in a Sample of Rural Felony Probationers

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Abstract

Objective—Relationships between readiness to change and common drug-related behaviors were explored in a sample (*N* = 776) of rural probationers in the state of Kentucky.

Methods—Self-reported data was gathered on measures of readiness to change, frequency of marijuana use, possession of drugs/related paraphernalia, and driving while under the influence of drugs/alcohol at time periods before and after arrest.

Results—Independent of the influence of demographic characteristics such as age, gender, race, and treatment history, increases in readiness to change scores were accompanied by reductions in all three drug—related behaviors.

Conclusion—Readiness to change has important implications for treatment involving rural probationers.

Overview

A great deal of focus has been placed on substance users readiness to change and its relation to actual substance use, treatment, and other associated behaviors (1,2,3). Although research on the transtheoretical perspective has generally been met with favorable results, relatively little attention has been paid to the influence of characteristics such as cultural background and criminal history on readiness and change across time (4). The goal of the current study is to apply the transtheoretical framework to the examination of marijuana use, possession of drugs or related paraphernalia, and driving under the influence among rural substance-using probationers.

Rural Substance Use and Individual Differences in Readiness to Change

The transtheoretical perspective stresses attention to individuals' progression through four distinct stages of readiness to change perceptions and behaviors (i.e., pre-contemplation, contemplation, action, and maintenance) related to health behaviors such as substance use (5). For different groups, significant and linear relationships found between readiness to change and various problem behaviors may not exist in the same ways or to similar extents (6,7,8). One illustration of this idea may involve the drug use patterns of individuals living in rural settings (9). Although rural residents make up almost 21% of the population of the United States, relatively little is known about substance use-related problems or associated psychological constructs among rural residents (10). In fact, studies have shown that the experiences and issues surrounding rural substance use differ from those of non-rural users (11,12). Drug preference and availability are examples of differences between rural and urban substance users (13). Yet, even with these differences, no known study has examined the relationship between readiness to change and drug-related behaviors in rural criminal justice

Submitted to: The American Journal of Drug and Alcohol Abuse

populations. The application of the transtheoretical model to their particular experiences could lead to a better understanding of how readiness to change might ultimately influence behaviors for other specialized populations as well.

The Current Study

The current study focuses on the most commonly committed criminal offenses among probationers (14). Specifically, the majority of probationers are under criminal justice supervision for drug law violations (26%) and driving under the influence (15%). The transtheoretical model will be used as a framework to predict changes in marijuana use, possession of drugs or related paraphernalia, and driving under the influence of alcohol or drugs (DUI) among rural substance-using probationers.

Method

Participants and Procedure

This study was originally undertaken to examine factors leading to the reduction of HIV risk behaviors among rural felony probationers. A total of eight hundred participants were recruited in probation offices within thirty pre-determined rural counties in Kentucky. Three waves of data were gathered (i.e., baseline, 3-month follow-up, 6-month follow-up). Data regarding demographic characteristics, substance abuse treatment, readiness to change, substance use frequency, and criminal behavior was collected using face-to-face interviews.

The current study focused on changes in probationers' attitudes and behaviors with regard to the baseline and 3-month follow-up interview. Participant retention across this time period was relatively high (97%) yielding a final sample size of 776 individuals who completed all relevant measures. The mean age of participants was 32.2 years. The majority of the sample was unmarried (70.6%), white (94.4%), and males (71.3%). Participants reported an average of 1.9 children. Forty-two percent were on probation for a drug or alcohol-related charge. With regard to previous treatment, 51% of the sample reported having participated in some form of self-help. The sample averaged 1.7 treatment entries in their lifetime.

Measures

Readiness to change substance use—Sixteen items from McConnaughy, Prochaska, and Velicer's (15) University of Rhode Island Change Assessment (URICA) were adapted for substance use and summed to measure participants' willingness to change their current substance use behaviors for the substance they felt was most problematic. Sample items are "As far as I'm concerned, I don't have any problems regarding _ that need changing," and "I am finally doing some work on my problem with _." Responses were made on a five-point continuum (*strongly disagree* to *strongly agree*), where a higher score (after necessary reverse scoring) reflects a greater readiness to change for substance use related behaviors. The readiness to change scale has been validated (5).

Drug-related behaviors—There were 3 dependent variables of interest. Marijuana use was measured by the number of days participants reported using marijuana between the baseline and the 3-month follow-up interview. Drug possession was measured by the number of times individuals reported possessing drugs or related paraphernalia. DUI was measured by the number of times a person reported driving under the influence of drugs or alcohol across that same time period.

Demographics and previous treatment—Participants' age, gender, race, marital status, number of children, reason for being on probation, and treatment status (i.e., whether or not

participant was participating in a self-help group and their overall number of treatment entries) were included as statistical controls in the analyses.

Analytic Strategy

A series of three hierarchical regression analyses were conducted on the final sample ($N = 776$) to examine the extent to which changes in participants' levels of readiness to change predicted differences in marijuana use, possession of drugs or related paraphernalia, and DUI. To assess fluctuation across time in individuals' readiness to change, difference scores were computed by subtracting readiness to change values assessed at baseline from those obtained at follow-up. For each regression model, this readiness to change variable was entered simultaneously with baseline demographic and previous treatment variables to examine the extent of its unique influence on the three dependent variables.

Results

Marijuana Use

Older participants ($\beta = -.15$, *S.E.* = .01, $p < .01$) and females reported less marijuana use ($\beta = -.15$, *S.E.* = .20, $p < .01$). After controlling for variance related to individual differences in demographic characteristics, and previous treatment, changes in readiness to change still emerged as a significant predictor of the frequency of rural individuals' marijuana use in the previous 3 months (see Table 1). More specifically, as readiness to change increased from baseline to follow-up, the number of days participants used marijuana decreased ($\beta = -.13$, *S.E.* = .01, $p < .01$)

Possession of Drugs or Related Paraphernalia

Increases in readiness to change among rural probationers also led to fewer days possessing drugs or related paraphernalia in the past 3 months. Specifically, as readiness to change increased, self-reported possession decreased ($\beta = -.10$, *S.E.* = .34, $p < .05$).

Driving While Under the Influence

Consistent with the pattern of results reported from other models, increasing levels of readiness were also related to DUI in rural settings. More specifically, participants' with higher levels of readiness to change reported fewer instances of DUI ($\beta = -.14$, *S.E.* = .07, $p < .01$).

Discussion

The focus of the current research was to extend the applicability of the transtheoretical model to common criminal offenses committed by rural probationers. We examined patterns of common drug use and related behaviors (i.e., marijuana use, possession, and DUI) as they were influenced by changes in rural individuals' readiness to change. Increases in individuals overall readiness to change scores (i.e., from baseline to 3-month follow-up) were accompanied by reductions in marijuana use, possession of drug related paraphernalia, and DUI across that same period. Importantly, these effects were independent of the influence of demographic characteristics such as age, gender, race, marital status, number of children, type of probation offense, and treatment history.

Readiness to Change in Rural Populations

Rural probationers experience different pressures and exhibit unique drug use patterns (16). Consistent with research on readiness to change in other groups, results of the current study suggest that increasing intentions to change has an effect on reducing frequency of drug use

and other drug-related behaviors for rural probationers. However, the process by which change actually occurs could be different among these individuals.

Treatment in Rural Settings

Other studies have documented differences in the availability, accessibility, and quality of rural treatment (17,18). However, relatively few studies have focused on the actual content of that treatment and how it might be better tailored to the specific types of problems encountered by rural drug abusers. In the current study, rural drug users' readiness to change predicted positive outcomes with regard to commonly committed drug-related offenses. Given that the ultimate goal of treatment is to reduce drug use and other drug-related behaviors, and that greater levels of readiness to change are positively related, future studies should examine how recognition and progression through the stages of change in the transtheoretical model might themselves be applied in a rural program.

Structure and consistency in treatment—Because of geographical limitations, rural drug abusers may have less access to services, treatment, and social support (19). Initiation of movement through the four stages of change may be more difficult. To offset these potential difficulties, public policy makers and treatment providers could take a more structured and consistent approach. Examples of potentially effective strategies include 1) devising procedures to help individuals to clearly define problem behaviors, 2) discussing how those behaviors impact quality of life and the lives of those around them, 3) generating a plan by which the individual could change behaviors related to their use, and 4) creating a strict schedule whereby progress toward these goals can be monitored.

Influencing normative beliefs about use—For many rural residents, growing and using marijuana are seen as a part of culture, even to the extent that marijuana is considered a cash crop in the state of Kentucky (20). Certainly, altering perceptions that marijuana use is favorable and at some level even necessary is difficult. However, the bottom line for these individuals remains the same as that for others. To the extent that perceptions regarding needs and ability to alter drug use and related behaviors can be favorably influenced, the results of the current study show that problems associated with these behaviors can be reduced. In relation to treatment, programs should focus on combating the perceptions that use of certain drugs is normative. By influencing individuals perceptions of norms and social comparisons, perceptions about the existence of problem behaviors may change. Once contemplation, action, and maintenance have begun, illustration of positive role models could help to reinforce the effects of treatment in rural areas which are exposed to relatively homogeneous social networks.

Future Directions

Readiness to change is commonly measured using an approach in which individuals' scores across all domains are totaled for an overall readiness score. A second, less used option, involves tallying scores separately for each of the stages, thus allowing for the examination of how variability in each of those stages might separatelyinfluence behavioral outcomes. Although these approaches are both viable and yield different and important information, each is probably an incomplete expression of an individuals' actual experience of change. Future studies may wish to examine how differences in scoring and measuring readiness to change influence the patterns of results and types of relationships observed in relation to this construct.

Limitations

This study provides additional information on the transtheoretical model of change for rural populations; however, there are limitations. First, individuals were only asked about readiness

to change for the substance which they felt they had the most problem controlling use of. If readiness to change problem behaviors is "substance specific," the results of the current study might underestimate the utility of the transtheoretical model in predicting change across a wider spectrum of substances and related behaviors. Second, although a novel aspect of the current study was its focus on the transtheoretical model applied to rural probationers, care should be taken about generalizing these results to other populations. However, even with these limitations, results of this study provide support for the efficacy of the transtheoretical model in influencing behavioral outcomes in rural probationers.

Acknowledgments

NOTE: This research was supported by grant #R01DA11580 from the National Institute on Drug Abuse. The opinions expressed are those of the authors.

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Table 1

Hierarchical Regression Model Predicting the Number of Days Used Marijuana in the Last 3 Months (N = 776)

	β	SE	t	Sig.
Age	-.152	.010	-3.07	.002
Gender	-.145	.197	-3.07	.002
Race	.044	.390	0.93	.354
Marital Status	-.056	.012	-1.17	.241
Number of Children	.048	.048	0.98	.326
Probation for Drug/Alcohol Charge	-.011	.185	-0.23	.818
Self-Help	-.052	.198	-1.00	.317
Treatment Entries	-.022	.037	-0.45	.955
Readiness to Change	-.127	.010	-2.67	.007

Note: Variables were entered into the model simultaneously