



The influence of cannabis motives on alcohol, cannabis, and tobacco use among treatment-seeking cigarette smokers



Dawn W. Foster^{a,*}, Nicholas P. Allan^b, Michael J. Zvolensky^c, Norman B. Schmidt^b

^a Yale School of Medicine, Department of Psychiatry, New Haven, CT, United States

^b Florida State University, Department of Psychology, Tallahassee, FL, United States

^c University of Houston, Department of Psychology, Houston, TX, United States

ARTICLE INFO

Article history:

Received 1 September 2014

Received in revised form 14 October 2014

Accepted 17 November 2014

Available online 26 November 2014

Keywords:

Cannabis
Marijuana
Alcohol
Tobacco
Smoking
Motives

ABSTRACT

Objectives: The present study evaluated the effects of cannabis motives on multi-substance use in an effort to examine the incremental validity of cannabis motives with respect to substance use outcomes.

Methods: Participants were 167 treatment-seeking smokers (41.92% female; $M_{age} = 28.74$; $SD = 11.88$) who reported smoking an average of 10 or more cigarettes daily for at least one year.

Results: Structural equation modeling was used to examine the association between cannabis motives and two dependent variables each for alcohol (drinking frequency and alcohol problems), cannabis (cannabis use frequency and cannabis problems), and tobacco (average cigarettes per day and nicotine dependence). Findings indicated that conformity motives were linked with increases in alcohol problems and cannabis problems. Enhancement motives were associated with increased cannabis use and cannabis problems. Coping motives were linked with increased cannabis use and cannabis problems. Contrary to expectations, expansion motives were associated with reductions in the number of cigarettes smoked per day. Also, results supported expectations that the observed effects due to cannabis motives were unique from shared variance with theoretically relevant covariates.

Conclusions: The present findings supported predictions that cannabis motives would evince effects on the use of multiple substances over and above theoretically relevant variables. However, results indicate that the relationship between cannabis motives and multi-substance use is complex, and therefore, additional research is warranted to better understand substance use intervention.

© 2014 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

1.1. Multiple substance use

Alcohol, cannabis, and tobacco are the most widely used substances and they frequently co-occur and interplay with one another in clinically significant ways (Kessler et al., 1997; Redonnet et al., 2012; Roxburgh et al., 2013). For example, cigarette smoking is a key precursor to cannabis relapse (Haney et al., 2013). Further, strong associations between tobacco and alcohol consumption have been documented (Palfai et al., 2000). Relative to abstainers, drinkers are 75% more likely to use tobacco, and 85% of smokers also drink (Harrison et al., 2009; Howell et al., 2010; Krukowski et al., 2005; Reed et al., 2007). Moreover, cannabis is related to a myriad of negative outcomes, including psychological symptoms

and disorders (Patton et al., 2002; Zvolensky et al., 2006), and tobacco smokers are more likely to use cannabis (Ford et al., 2002). Coupled with tobacco and alcohol use, cannabis use has adverse effects on fetal growth and development (Cornelius et al., 2002; Richardson et al., 1995), increases risk for harder drugs (Golub and Johnson, 2001), and negatively impacts educational achievements (Centers for Disease, 1991; Martin et al., 1992). Interventions for co-occurring substance use have demonstrated favorable effects (Chariot et al., 2013; Gmel et al., 2013; Laporte et al., 2014). However, recent work has shown differential effects on health risk behavior when comparing the influence of cognitive processes related to one substance versus a different substance. Specifically, alcohol-related cognitive processes have been shown to impact smoking outcomes more strongly than smoking processes impact alcohol consumption (Piasecki et al., 2011). Additionally, cognitive factors important in the process of quitting substance use may not have a straightforward relationship with reducing poly substance use (, 2014). Foster et al. (in press) found that although co-use of tobacco and alcohol decreased among individuals with more cognitive processes related to quitting smoking, a subset of individuals

* Corresponding author. Tel.: +1 202 974 7892.

E-mail addresses: dawn.foster@yale.edu, dawnwofoster@gmail.com (D.W. Foster).

were at greater risk for heavier alcohol use, despite also having greater smoking quit processes. These findings suggest that among multiple substance users, cognitive factors that may facilitate quitting or protect against problem use of substance (e.g., tobacco) might pose difficulties to quitting other substances (e.g., alcohol or cannabis).

1.2. Motives for cannabis use

One avenue of research that has facilitated development of effective interventions relates to motivational bases of cannabis use. Extensions of its utility to better understanding tobacco and alcohol use have provided important and clinically-relevant insights into patterns related to multiple substance use (Cooper, 1994; Piper et al., 2004). There are five established motives for cannabis use; social, coping, enhancement, conformity, and expansion (Bonn-Miller et al., 2007; Chabrol et al., 2005; Zvolensky et al., 2007a,b). Endorsement of specific motives has been linked with cannabis use frequency in varying populations (Chabrol et al., 2005; Simons et al., 2000) and cannabis motives are shown to be incrementally and uniquely associated with cannabis use over and above the variance explained by alcohol and cigarette use (Bonn-Miller et al., 2007; Zvolensky et al., 2007a,b). Recent work has demonstrated associations between cannabis motives related to coping and gender (Bujarski et al., 2012), conformity, coping, and expansion motives and personality risk factors (Hecimovic et al., 2014), coping motives and social anxiety (Buckner et al., 2014), and enhancement, social, and coping motives and the experience of cannabis-related problems (Buckner, 2013).

Although previous work has evaluated cannabis motives and other substance use (Norberg et al., 2014; Zvolensky et al., 2007a,b), comparatively little is known about the influence of cannabis motives on concurrent substance use (i.e., tobacco, alcohol, and cannabis). Cross-substance motives literature has evaluated why tobacco users may use cannabis (Agrawal et al., 2012), and has also examined associations between alcohol and cannabis motives and alcohol-cannabis co-use (Simons et al., 2005). However, research exploring links between cannabis use motives and multi-substance use is scarce, and as a result, relatively little is known about whether specific motives uniquely contribute to the prediction of co-use and other clinically relevant phenomena over and above theoretically related variables (e.g., gender). Thus, it is necessary to better understand potential antecedents to concurrent use in order to further elucidate critical junctures for altering substance use behavior.

1.3. Current study

The present study was designed to address this gap in knowledge by examining relationships among cannabis motives and the use of alcohol, tobacco, and cannabis in a sample of daily cigarette smokers who consume alcohol and cannabis using structural equation modeling (SEM) to account for measurement errors of the observed variables by modeling them as latent constructs (Kline, 2011a). This effort will facilitate further advances in understanding how motives for one substance (i.e., cannabis) can relate to co-occurrence of alcohol, tobacco, and cannabis in a treatment seeking population. We examined the incremental validity of cannabis motives in regard to drinking frequency, drinking level, cannabis use, cannabis problems, nicotine dependence, and the number of cigarettes smoked per day. Additionally, we evaluated the unique effects above and beyond theoretically relevant covariates including gender, education, and race (Goncy and Mrug, 2013; Westmaas and Langsam, 2005). Based on previous work indicating positive associations between motives and use (Chabrol et al., 2005), we

expected that cannabis motives would be significantly linked with increases in alcohol consumption, tobacco use, and cannabis use. Further, we expected that any observed effects would be unique from shared variance with covariates. These expectations are based on theoretically relevant motivational models and empirical evidence, which suggests that among multiple substance users, factors including motives or reasons for use are linked with substance use.

2. Method

2.1. Participants

The present sample consisted of 167 treatment-seeking daily smokers (41.92% female; $M_{age} = 28.74$; $SD = 11.88$). The racial and ethnic distribution of this sample was as follows: 83.23% identified as White/Caucasian; 7.78% identified as Black/Non-Hispanic; 0.60% identified as Black/Hispanic; 3.59% identified as Hispanic; 1.20% identified as Asian; and 3.59% identified as 'Other.' 21.56% of participants completed high school as their highest form of education, 48.50% completed some college, 11.98% obtained a 4-year college degree, 7.19% obtained a 2-year college degree, 3.59% obtained a graduate degree, 3.59% completed some graduate school, and 3.59% completed less than a high school degree. Of the sample, 52.73% met criteria for at least one current (past month) Axis I diagnosis including social phobia (9.70%), alcohol abuse (5.45%), alcohol dependence (4.24%), cannabis abuse (4.24%), cannabis dependence (3.03%), and generalized anxiety disorder (3.64%).

Participants for the present study were recruited for participation in a larger longitudinal trial, for which inclusion criteria included: (1) 18 years or older; (2) reporting smoking an average of 10 or more cigarettes per day for at least one year; and, (3) providing a carbon monoxide breath sample of 10 ppm or higher during the baseline session. Participants were excluded based on the following criteria: (1) current homicidality or suicidality; (2) endorsement of past or current psychotic-spectrum symptoms via structured interview screening; and (3) limited mental competency and inability to provide informed, voluntary, written consent. Participants were included in the present analyses, if they reported having used cannabis in their lifetime, and alcohol within the previous month.

2.2. Measures

Demographics: Participants provided demographic information including gender, age, racial background, ethnicity, and highest education level.

The Structured clinical interview for DSM-IV Axis I disorders (SCID-I): The SCID-I-NP (Non-Patient Version) was used for diagnostic assessments in order to assess DSM-IV-TR diagnoses for past and current Axis I Disorders (First et al., 2002). All SCID-I interviews were administered by trained research personnel including research assistants and doctoral level staff, and were supervised by independent doctoral-level professionals. Interviews were audio-taped, and the reliability of a random selection of 12.5% of interviews was reviewed (MJZ) for accuracy; no cases of diagnostic coding disagreement were noted.

Alcohol use and problems: Alcohol use was assessed using one item from the Alcohol History Questionnaire (AHQ). The 42-item AHQ (Filbey et al., 2008) assesses quantity and frequency of use. Example items include "How many years have you been drinking regularly?" and "How old were you when you first had an alcoholic drink?" Item 4, "In the last year, how many days per week did you drink alcohol on average was used to assess drinking frequency. The Alcohol Use Disorders Identification Test (AUDIT), used to measure alcohol problems, is a 10-item measure that screens for hazardous or harmful drinking (Saunders et al., 1993). Items assess heavy drinking, quantity and frequency of use, dependence, tolerance, and problems. The AUDIT's internal consistency alpha was 0.83 in the present sample, and in past work it has reliably distinguished between hazardous, harmful, and no drinking histories (Fleming et al., 1991). An AUDIT score of 8 produces 85% sensitivity and 89% specificity for harmful or hazardous drinking (Cherpitel, 1995).

Cannabis use and problems: Cannabis use was assessed using one item from the 40-item Marijuana Smoking History Questionnaire (MSHQ). The MSHQ assesses history and patterns of cannabis use (Bonn-Miller and Zvolensky, 2009). Example items include "How many years have you smoked marijuana?" and "Think about your smoking during the last week, how much marijuana did you smoke per occasion in an average day?" Participants rated the latter item on an eight-point Likert scale. Scores correspond to pictures depicting increasing sizes of cannabis joints, with 1 indicating the smallest cannabis joint and 8 indicating the largest cannabis joint. Previous research has used the MSHQ as a successful indicator of cannabis use (Buckner et al., 2012). Item 2, "Please rate your marijuana use in the past 30 days" was used to assess cannabis use frequency. Cannabis problems were assessed using 19-item Marijuana Problems Scale (MPS). The MPS is a 19-item list of negative social, occupational, physical, and personal consequences associated with cannabis use in the previous 90 days (Stephens et al., 2000). Cronbach's alpha (.83) indicates that the measure was internally consistent in the present sample, with scores ranged from 0 to 28.

Tobacco use: Tobacco use was assessed using two measures; the Smoking History Questionnaire (SHQ) and the Fagerström Test for Nicotine Dependence (FTND). Smoking rate, years of being a daily smoker, age of onset of initiation,

Download English Version:

<https://daneshyari.com/en/article/7505430>

Download Persian Version:

<https://daneshyari.com/article/7505430>

[Daneshyari.com](https://daneshyari.com)