



Past month and past year associates of marijuana use in a predominantly Hispanic college student sample

Roman Fregoso, Ileana Acosta, Lizette Salcido, Analisse Acosta, Diana Villegas, Theodore V. Cooper, University of Texas at El Paso, El Paso, TX



Introduction

Background

- Among college students, marijuana is the most commonly used illicit substance (Pearson, Liese, Dvorak, 2016).
- Most students in college will experience their first encounter with substance abuse and mental health problems (Pedrelli et al., 2014).
- To cope with daily stresses, mental health and substance abuse issues many college students will substitute or co-use with marijuana (Haardörfer et al., 2016).
- Studies suggest motives held to use marijuana may be due to perceiving its use as socially acceptable (Evans-Polce, Lanza, Maggs, 2015).
- Relative to other licit and illicit substance use, systematic study of marijuana use is emerging and growing in salience (Hasin, 2017).
- However, there are a lack of studies examining the correlates of Hispanic college student marijuana use.

Aim

The aim of this study is to assess marijuana use frequency and potential demographic and psychosocial correlates in Hispanic college students.

Methods

Participants

Participants were recruited through psychology courses; 396 participants completed an online consent process and survey (71% female; 87% Hispanic; Age ($M= 20.16$, $SD = 3.87$)).

Measures

Sociodemographics: This questionnaire collected typical sociodemographic information (e.g. age, sex, education).

Current Smoking: This is a dichotomous smoking variable that distinguished between current non smokers and current smokers.

Alcohol, Tobacco, and Drug Use Frequency: Assessed the age of first use, past month, past year, and lifetime use of various drugs (e.g., cheese, marijuana, LSD).

Marijuana Decisional Balance Scale (MDB; Elliot et al., 2011): The scale includes 8 pros and 16 cons, respondents rated the items regarding whether the items were likely to influence the respondent's decision to use marijuana, using a five-point scale ranging from 1 (not important) to 5 (extremely important). Internal consistency of the MDB pros and cons subscales were $\alpha = 0.954$ and 0.965 respectively.

Comprehensive Marijuana Motives Questionnaire (CMMQ; (Lee, Neighbors, Hendershot, Grossbard, 2009): This scale consists of 36 items representing 12 different motives for using marijuana: enjoyment, conformity, coping, experimentation, boredom, alcohol use, celebration, altered perceptions, social anxiety, relative low risk, sleep, and availability. Users utilized a scale of 1 ("almost never or never") to 5 ("almost to always or always"). Items within each subscale are summed and an average score computed. Subscale internal consistencies were adequate (all α s > 0.925)

Nicotine and Marijuana Interaction Expectancy (NAMIE; Ramo, Liu, & Prochaska, 2011): Participants rated statements about tobacco and marijuana use on a scale from 1 ("never") to 5 ("always"). Scales were: 1) the effects of marijuana use on smoking; 2) the effects of smoking on marijuana use; and 3) smoking cigarettes to cope with urges to use marijuana. Scale scores were computed as the mean of the item ratings that make up the component, therefore having a range from 1 to 5. Subscale internal consistencies were adequate (all α s > 0.930).

Methods (Cont.)

Procedure

IRB approval was obtained prior to study implementation. Participants were recruited via SONA system, a web-based recruitment site. After providing consent, students completed the online assessment and received class credit for participating. Participants read and electronically signed the consent form before proceeding with the online survey.

Approach to Analyses

Two linear regression models assessed past month and past year correlates of marijuana use in a predominantly Hispanic sample. Correlates assessed were age, sex, ethnicity, MDB, CMMQ, and NAMIE subscales.

Results

Linear regressions assessed correlates of past month and past year marijuana use. Both the past month ($F(21, 156) = 2.86$, $p < .001$, $R^2 = .28$) and past year ($F(21, 153) = 4.60$, $p < .001$, $R^2 = .39$) marijuana frequency models were statistically significant. See Tables 2 and 3. for statistically significant correlates.

Table 1: Descriptive statistics (N = 396 Hispanic College Students)

Continuous Variables		M	SD	Range
Age	394	20.16	3.872	17-53
Past Year Marijuana Use	178	15.63	53.153	0-365
Past Month Marijuana Use	181	1.82	5.819	0-45
MDB- Pros	325	3.5746	1.2726	1-5
MDB- Cons	325	2.4360	1.21259	1-5
CMMQ: Enjoyment	324	1.9084	1.27556	1-5
CMMQ: Conformity	324	1.5381	.92118	1-5
CMMQ: Coping	324	1.6173	1.03214	1-5
CMMQ: Experimentation	324	1.8992	1.19688	1-5
CMMQ: Boredom	324	1.6574	1.02409	1-5
CMMQ: Alcohol	324	1.5741	.97174	1-5
CMMQ: Celebration	324	1.7757	1.13507	1-5
CMMQ: Altered Perception	324	1.6986	1.10321	1-5
CMMQ: Social Anxiety	324	1.5957	1.02938	1-5
CMMQ: Relative Low Risk	324	1.7006	1.06540	1-5
CMMQ: Sleep	324	1.6471	1.08018	1-5
CMMQ: Availability	324	1.7387	1.05326	1-5
NAMIE Sub scale: 1	323	4.7207	.6636	1-5
NAMIE Sub scale: 2	323	4.7171	.70087	1-5
NAMIE: Sub scale:3	323	4.7141	.7254	1-5

Table 2: Linear regression of past month marijuana use

Variable	B	Std. Error	Beta
MDB Pros	-1.037	.404	-.224
CMMQ: Enjoyment ^a	1.380	.714	.323
CMMQ: Social Anxiety	1.985	.816	.359
NAMIE 2: Tobacco use increases marijuana use and urges	4.105	1.475	.498
NAMIE 3: Smoking to cope with marijuana urges	-2.843	1.328	-.371

*Note. All $ps < .05$; ^a $p = .055$

Table 3: Linear regression of past year marijuana use

Variable	B	Std. Error	Beta
Age	1.715	.748	.158
Hispanic or not	-22.521	10.84	-.0145
CMMQ: Coping	16.303	6.494	.319
CMMQ: Experimentation	-14.388	4.869	-.331
CMMQ: Social Anxiety	-18.211	7.307	-.352
CMMQ: Relative Low Risk	22.625	6.016	.493
NAMIE 2: Tobacco use increases marijuana use and urges	45.374	14.730	.548
NAMIE 3: Smoking to cope with marijuana urges	-24.810	12.286	-.347

*Note. All $ps < .05$

Discussion

Use rates found in the present study seem somewhat lower than use rates found in previous studies with college students (Lee et al., 2009). On the MDB, only pros of marijuana use were inversely related to past month frequency; clearly this finding is in contrary to hypotheses and warrants further exploration (Elliott, Carey, 2013). As in previous studies, some marijuana motives were associated with both past month and past year use; however, significant motives demonstrate different patterns from a previous study with college students (Lee et al., 2009) and one with adults seeking renewal for medical marijuana (Bohnert et al., 2018). Here, perhaps most unique is the finding that social anxiety motives have a positive relationship with past month use and an inverse one with past year use. It may be that those who have used more frequently in the past month have done so with the "acute" motive of reducing social anxiety, while those who have used more frequently in the past year identify other stronger motives (such as seeing use as relatively low risk or to cope more generally) or have transitioned to using outside of social situations. The dual use of nicotine and marijuana expectancies suggest that greater frequency users in the past month and past year indicate tobacco use increases marijuana use urges, yet greater use does not suggest using nicotine to cope with marijuana urges, perhaps as these participants are actually using marijuana more frequently rather than diminishing its use through tobacco.

Limitations and Strengths

This study was cross sectional and correlational, limiting an ability to assess the correlates of use in a temporal fashion. Given the ethnocultural make-up of the study, its generalizability to all college students and/or young adults needs to be explored in future studies. The sample represents a strength however, in that findings provide insight into marijuana use and correlates in a college student sample comprised of primarily of Hispanics.

Future Directions

Findings may contribute to improving marijuana prevention and cessation interventions for Hispanic college students, suggesting focus on motives, coping styles, and social context of use. Future directions include assessing these relationships prospectively and potentially in real time, as well as the efficacy of marijuana use prevention and intervention strategies tailored toward stress and anxiety reduction.

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