

Cannabis and Nicotine Use: Coping Mechanisms Among LGBTQIA+ College Students

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Problem/Background

- Cannabis and nicotine use are significant public health concerns among college students, with use of both substances on the rise.
- The US Surgeon General recently described the alarming rise of electronic cigarette (e-cigarette) use among young adults as an epidemic.
- Alongside the growing concerns about e-cigarette use, is the increasing use of cannabis among college students.
- In 2016, Cannabis use among full-time college students was 39%, this is a 30-year high.
- Lesbian, gay, bisexual, transgender, intersex, asexual, and other individuals who do not identify as heterosexual and/or cisgender (LGBTQIA+) adolescents and adults have well-documented disparities in rates of cannabis and e-cigarette use relative to their non-LGBTQIA+ peers.
- Prior research has shown that LGBTQIA+ young adults begin using substances earlier than their peers, substance use escalates more quickly, and these differences may persist over the life course.
- Limited research has assessed stress, coping, cannabis, and nicotine use among LGBTQIA+ college students compared to their heterosexual peers.

Purpose

The purpose of this study was to assess differences in coping and nicotine and cannabis use among college students, with attention to sexual orientation. The goal is to better understand how students cope with stress through using substances and how this may differ by sexual orientation.

Methods

Inclusion Criteria:

- 18 years or older
- Student at Northern Arizona University

Procedure:

- Participants were recruited through in-class announcements, emails, fliers, and word of mouth.
- Freshman PSY101 students were offered class credit for participation.
- All participants were eligible for \$15 gift card raffle.
- All participant read a consent form and agreed to participate.
- All responses are anonymous.
- Participants completed an online 20-30minute survey using REDCap.

Measures:

- The Addiction Severity Index (ASI; McLellan et al., 2006) assessed the participants' use of cannabis (any form) or nicotine (e-cigarettes), the frequency of their use, and last date of use.
- The Perceived Stress Scale (PSS; Cohen et al., 1983) assessed how often within the last month that the participants felt stressed. 14-items rated from 1–5, $\alpha = 0.81$.
- The Brief COPE inventory (Carver, 1997) assessed the coping strategies and styles (avoidant coping, emotion-focused coping, and problem-focused coping) of the participants. 28-items rated from 1–4, $\alpha = 0.85$.
- The Marijuana Decisional Balance Scale (MDB; Elliott et al., 2011) was used to investigate motivations behind cannabis use divided into "pros" and "cons" subscales. 8-items for the pros scale and 16-items for the cons scale, both rated from 1–5, Pro $\alpha = 0.83$, Con $\alpha = 0.95$.
- The E-Cigarette Outcome Expectancy Measure (Barker et al., 2019) was used to investigate participants' perceptions of outcomes associated with e-cigarette use divided into "pros" and "cons" subscales. 11-items for the pros scale and 8-items for the cons scale, both rated from 1–5, Pro $\alpha = 0.88$, Con $\alpha = 0.79$.

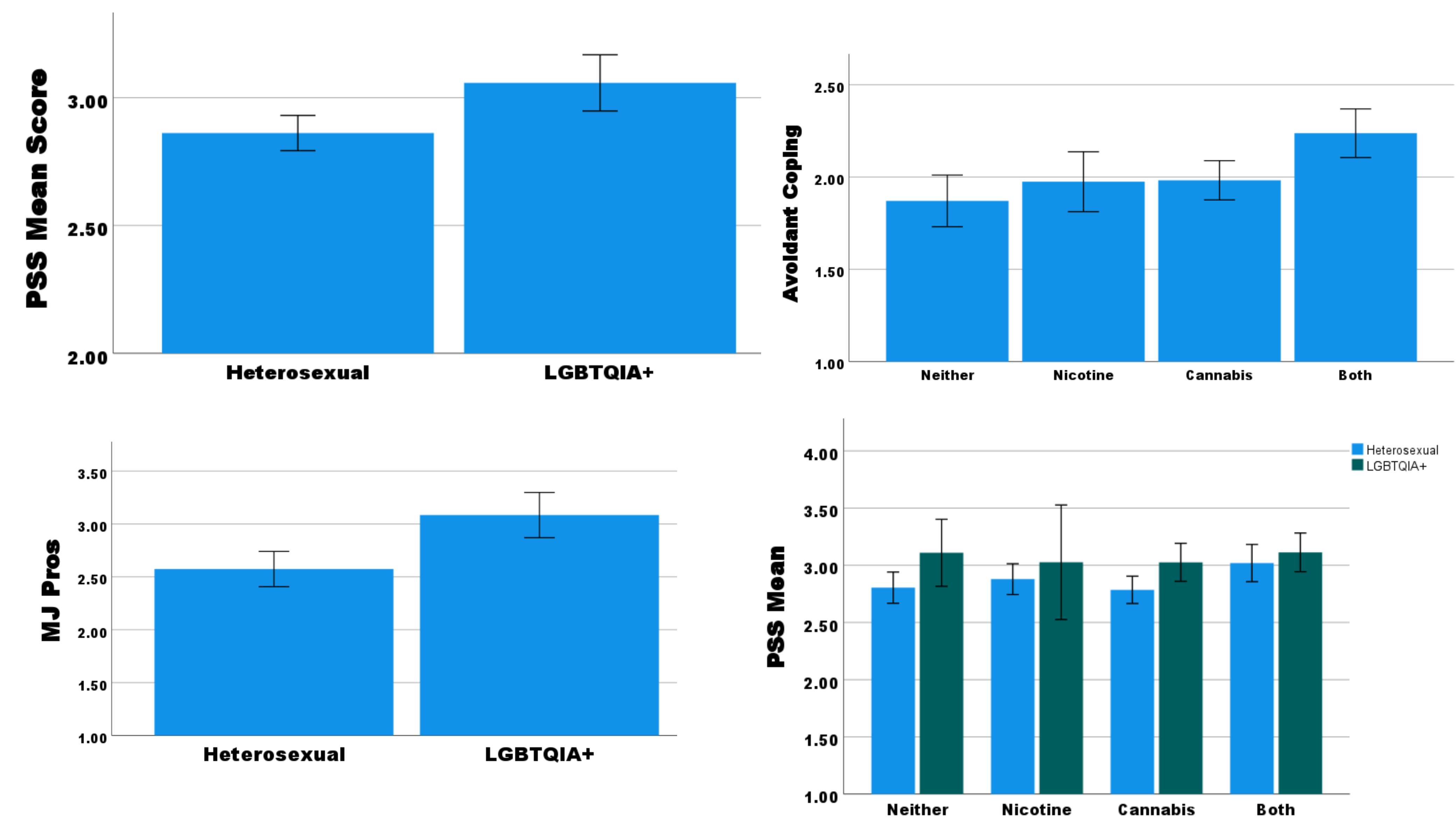
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Table 1: Demographics of 270 Students

Variable	%	M (SD)
Gender		
Women	73%	
Men	20%	
Non-binary	5.6%	
Transgender Women	0.4%	
Transgender Men	0.7%	
Race & Ethnicity		
Non-Hispanic White	58.5%	
Non-Hispanic Black	4.8%	
Non-Hispanic other	9.6%	
Hispanic White	14.4%	
Hispanic other	12.6%	
Sexuality		
Heterosexual	68.1%	
Homosexual	6.3%	
Bi/pansexual	21.9%	
Queer	3.0%	
Year in School		
Freshman	55.6%	
Sophomore	25.6%	
Junior	12.2%	
Senior	4.8%	
5 th year or beyond	1.8%	
Use in the Past Month		
Nicotine (E-cig)	14.8%	
Cannabis	39.6%	
Both	22.2%	
Neither	23.35%	
Route of Admin (Cannabis)		
Inhale	67.1%	
Oral/ingest	50.3%	
Vape/e-cig	66.5%	
Other	4.2%	
E-cig times per day		21.6 (43.2)
E-cig cartridges per month		12.5 (63.6)
Cannabis smoked times per month		13.9 (22.2)
Cannabis grams each time		1.6 (5.1)
Cannabis ingested times per month		4.2 (12.8)
Cannabis mg of THC each time		23.8 (34.1)
Age		19.2 (2.4)
PSS		2.9 (0.5)
Cope (Problem Focused)		2.7 (0.6)
Cope (Emotion Focused)		2.5 (0.5)
Cope (Avoidant)		2.0 (0.6)
MJ Pro		2.7 (1.1)
MJ Con		3.1 (1.1)
Ecig Pro		2.4 (0.9)
Ecig Con		3.1 (0.9)

Results



Conclusion and Discussion

- There was no association between age and any of the variables of interest.
- As for year in school, juniors reported slightly higher problem-focused coping and emotion-focused coping compared to the sophomores.
- The only difference by race was that Native American/Indigenous students reported significantly higher avoidant coping as compared to the student of other races.
- The LGBTQIA+ students had significantly higher perceived stress scores, higher emotion-focused coping, higher avoidant coping, higher cannabis use pros, and lower cannabis use cons.
- For the overall group participants who reported using nicotine and cannabis in the past month reported higher avoidant coping behaviors compared to participants who had not used nicotine or cannabis in the past month.
- Future research should explore why there are more pros and less cons to using cannabis within the LGBTQIA+ college student population and how that may influence prevention and treatment options.
- This study was limited by the self-report nature of the surveys and the majority freshman and female sample that may not be generalizable to other populations.
- The goal of this line of research is to better understand patterns behind students coping and use of substances. These patterns may differ among sexual and gender minority students and interventions that address these unique stressors and motivations behind substance use may be more effective.

Diversity, Health Equity, and Inclusivity

- This submission promotes diversity, health equity, and inclusivity in three major ways:
 - 1) The sample was collected from a Hispanic-serving institution (HSI) and included an overrepresentation of LGBTQIA+ students (32% compared to the national average of 17%).
 - 2) The implications of this work will lead to improvements in SUD prevention and treatment programs for college students, which contributes to health equity through the availability of treatments for populations at high risk of developing an SUD that could have long-term consequences.
 - 3) This research was conducted by diverse scholars and students from backgrounds underrepresented in the health and biomedical research.

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