

Changes in Mental Health Symptoms as a Predictor of Cannabis Coping Motives and Consequences: Examining the Impact of COVID-19 Among College Students

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Today's Presenter



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3

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4

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Overview

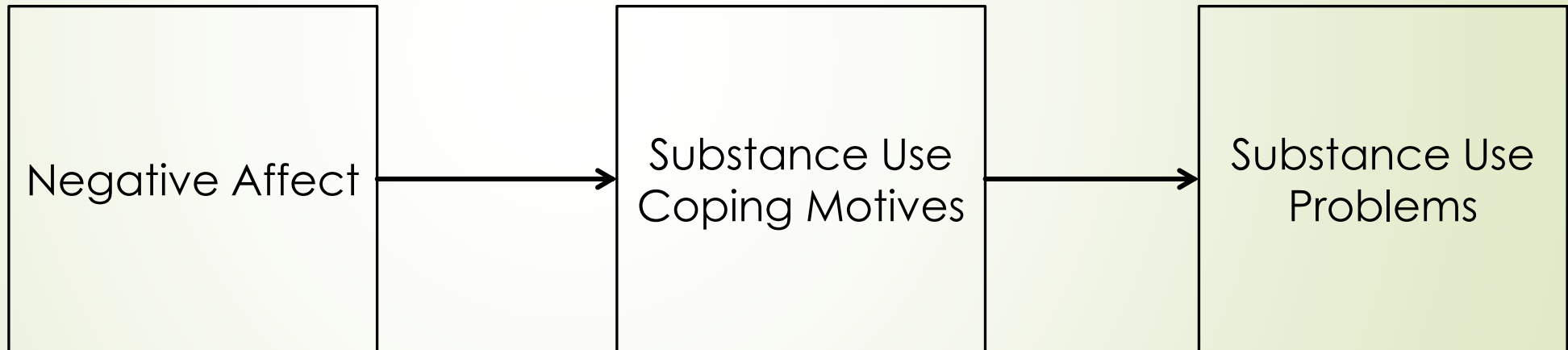
- Background Literature
- Aims and Study Methods
- Results and Discussion of Findings
- New Research Findings

Background Literature

- **Negative Regulation Pathway**
- This pathway refers to using a drug to diminish negative affect states like anxiety or depression
- Negative affect regulation is related to coping substance use motives
- Also known as self-medication hypothesis or tension reduction hypothesis

Background Literature

➤ Negative Regulation Pathway



Background Literature


➔ Negative Regulation Pathway

ALCOHOLISM: CLINICAL AND EXPERIMENTAL RESEARCH

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The Relationship Between Social Anxiety and Alcohol and Marijuana Use Outcomes Among Concurrent Users: A Motivational Model of Substance Use

Margo C. Villarosa-Hurlocker , Adrian J. Bravo, and Matthew R. Pearson; Protective Strategies Study Team[†]

Background: College students with more social anxiety symptoms are particularly vulnerable to problematic alcohol and marijuana use given their susceptibility for elevated anxiety symptoms in social settings combined with the normative nature of substance use. Existing research has established substance use as coping motivated for these students when examining alcohol and marijuana use problems separately. The next step is to determine whether students with more social anxiety who use both substances do so for similar or different reasons. The current study tested a comprehensive (i.e., all variables in the same model) motivational model of alcohol/marijuana use in a sample of college students from 10 universities across the United States who endorsed both past-month alcohol and marijuana use.

Methods: College students were recruited through psychology department participant pools and completed an online survey assessing mental health symptoms, substance use motives, and substances use behaviors. Current sample comprised concurrent alcohol/marijuana users ($n = 2,034$), 29.6% of whom endorsed clinically indicated levels of social anxiety and nearly one-fourth exceeded the cutoff for hazardous drinking (23.2%) and hazardous marijuana use (21.9%).

Results: Across both substances, coping motives significantly mediated the positive relationship between social anxiety symptoms and substance use problems. Unique to alcohol, conformity motives mediated the association between social anxiety symptoms and alcohol-related problems.

Conclusions: Taken together, students with more social anxiety who are focused on anxiety management may use either alcohol or marijuana; however, these students may experience more alcohol-related problems when drinking to fit in with peers.


Key Words: College Students, Social Anxiety, Substance Use Motives, Drinking Problems, Marijuana Problems.

AL & EXPERIMENTAL RESEARCH

Background Literature

➔ Negative Regulation Pathway

Addictive Behaviors 73 (2017) 94–98




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Short Communication

In the process of drinking to cope among college students: An examination of specific vs. global coping motives for depression and anxiety symptoms

 CrossMark

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ARTICLE INFO

Keywords:
 Drinking to cope
 Alcohol consumption
 Alcohol-related problems
 College students
 Anxiety
 Depression

ABSTRACT

The present study sought to address an issue in the drinking to cope (DTC) motives literature, namely the inconsistent application of treating DTC motives as a single construct and splitting it into DTC-depression and DTC-anxiety motives. Specifically, we aimed to determine if the effects of anxiety and depression on alcohol-related problems are best explained via their associations with DTC with specific affects or via their associations with a more global measure of DTC by testing four distinct models: the effects of anxiety/depression on alcohol-related problems mediated by DTC-anxiety only (Model 1), these effects mediated by DTC-depression only (Model 2), these effects mediated by a combined, global DTC factor (Model 3), and these effects mediated by both DTC-anxiety and DTC-depression (Model 4). Using path analysis/structural equation modeling across two independent samples, we found that there was a significant total indirect effect of both anxiety and depressive symptoms on alcohol-related problems in every model. However, there was a slightly larger indirect effect in all models using the global DTC motives factor compared to even the model that included the two distinct DTC motives. Our results provide some preliminary evidence that at least at the between-subjects level, a global DTC motives factor may have more predictive validity than separate DTC motives. Additional research is needed to examine how to best operationalize DTC motives at different levels of analysis (e.g., within-subjects vs. between subjects) and in different populations (e.g., college students vs. individuals with alcohol use disorder).

Background Literature

➔ Negative Regulation Pathway


SUBSTANCE USE & MISUSE
<https://doi.org/10.1080/10826084.2019.1696820>



ORIGINAL ARTICLE



The Relationship between Negative Affect and Alcohol and Marijuana Use Outcomes among Dual Users

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ABSTRACT

Background: Past research with college students has found that substance use motives, particularly coping motives, mediate the relationship between negative affect and alcohol- and marijuana-related outcomes. *Objectives:* This study aimed to investigate substance use motives of dual users of both substances (past 30-day use; not necessarily simultaneous use) and identify any mediation effects that are either common to both substances or substance-specific. *Methods:* The majority of dual users ($n=2,034$) identified as being White, non-Hispanic (63.8%), female (69.08%), and reported a mean age of 20.24 ($SD=3.16$) years. To test study aims, path models were conducted such that negative affect (stress, depressive and anxiety symptoms) were independently modeled as predictors of substance use outcomes (i.e. quantity and consequences) *via* substance use motives. *Results:* All three negative affect symptoms were indirectly related to both alcohol and marijuana consequences *via* coping motives, such that higher negative affect was associated with higher coping motives; which in turn were positively associated with consequences. Substance-specific effects were also found: (a) stress was indirectly related to both alcohol and marijuana use quantity *via* enhancement motives, (b) depressive/anxiety symptoms were indirectly related to alcohol use quantity *via* enhancement motives, and (c) all three negative affect symptoms were indirectly related to both marijuana use quantity and negative consequences *via* expansion motives. *Conclusions:* Findings suggests that dual users of alcohol and marijuana with negative affect symptoms engage in substance use for similar reasons as single substance users with negative affect symptoms. Intervention efforts should examine ways to replace substance-related coping and expansion methods with non-substance-related methods.

KEYWORDS

College students; negative affect; substance use motives; alcohol; marijuana; dual use

Background Literature

➔ Impact of COVID-19?

Research Article

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Cannabis

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ABSTRACT

Objective: Cannabis use is common among college students and many students use cannabis to cope with negative affect. The COVID-19 pandemic was a particularly stressful time for college students. Subsequently, the present study compared college students who reported increases in anxiety/depression symptoms since COVID-19 stay at home orders to those who reported no change in anxiety/depression symptoms on cannabis coping motives, use frequency, and negative consequences. Specifically, we examined whether self-reported changes (i.e., group that indicated increases) in poor mental health during COVID-19 were associated with problematic cannabis use via higher cannabis coping motives. **Method:** College students (analytic $n = 291$) completed an online survey for research credit regarding their personal mental health, COVID-19 stressors, and cannabis use behaviors. **Results:** Individuals who reported increased depressive symptoms (57.4% of the current sample) due to COVID-19 (as compared to individuals whose depressive symptoms remained the same) reported significantly higher cannabis coping motives ($d = .79$) as well as more cannabis consequences ($d = .37$). Further, students who reported increased (61.5% of the current sample) anxiety symptoms (as compared to those whose anxiety symptoms stayed the same) also reported significantly higher cannabis coping motives ($d = .47$). Moreover, we found that students who reported an increase in depressive/anxiety symptoms reported more cannabis consequences via higher endorsement of cannabis coping motives while controlling for gender, cannabis use frequency, and past-week anxiety/depressive symptoms. **Discussion:** Providing resources for substance-free coping strategies to manage the mental health impact of COVID-19 may be extremely useful for this population.

Background Literature

- **COVID-19 and Mental Health**
 - A clear increase in mental health struggles due to COVID-19 among college students (Fruehwirth et al., 2021; Kecojevic et al., 2020; Son et al., 2020)
 - In one study, less than half of the students reported that they were able to cope effectively with the stress related to the pandemic (Wang et al., 2020)

Background Literature

➔ COVID-19 and Cannabis Use

- ➔ In the fall of 2020, a national study found that 15.7% of 19-year-olds used cannabis to cope with COVID-19 (Patrick et al., 2022)
- ➔ However, when examining changes in cannabis use and consequences, the evidence is mixed (Schepis et al., 2021; Graupensperger et al., 2021; Merrill et al., 2022)

Aims of Present Study

- ▶ Compare college students who reported increases in anxiety/depression symptoms since COVID-19 stay at home orders to those who reported no change in anxiety/depression symptoms on cannabis coping motives, use frequency, and negative consequences
- ▶ Examine whether self-reported changes (i.e., group that indicated increases) in poor mental health during COVID-19 were associated with problematic cannabis use via higher cannabis coping motives

Study Methods - Participants

- ▶ Participants (n = 1,318) were college students recruited from Psychology Department participant pools from two universities in Virginia between Fall 2020 and Spring 2021

- ▶ For the present study, we only used data from students that:
 - ▶ a) Consumed cannabis on at least one day in the previous month
 - ▶ b) Answered questions about changes in mental health due to COVID-19
 - ▶ c) Completed assessments of cannabis coping motives, cannabis use frequency and consequences
 - ▶ d) Reported their gender

Study Methods - Participants

- Among the analytic sample ($n = 291$), most participants identified themselves as:
 - White, non-Hispanic (61.5%) or Black/African American (35.4%)
 - Female (70.8%)
 - Mean age of 20.31 ($SD = 3.71$) years

Study Methods - Measures

- **Self-reported Changes in Mental Health due to COVID-19**
 - “Since the COVID-19 stay at home order went into effect in your state, has your general level of depression/anxiety....”
 - Response options included: “increased”, “decreased”, or “remained the same”
- **Current Depressive/Anxiety Symptoms**
 - Depression, Anxiety, Stress Scale (Lovibond & Lovibond, 1995)

Study Methods - Measures

➤ Cannabis Coping Motives

- Marijuana Motives Questionnaire Short Form
(Simons et al., 1998)

➤ Cannabis Use Frequency

- Marijuana Use Grid (Pearson et al., 2022)

➤ Cannabis Consequences

- Brief Marijuana Consequences Questionnaire
(Simons et al., 2012)

Study Results

➤ **Self-reported changes in Depression**

- 53.2% reported an increase
- 38.5% reported that it remained the same
- 8.3% reported a decrease

➤ **Self-reported changes in Anxiety**

- 58.7% reported an increase
- 34.6% reported that it remained the same
- 6.7% reported a decrease

Study Results

➔ Differences on Marijuana Outcomes

Changes in Depressive Symptoms due to COVID-19

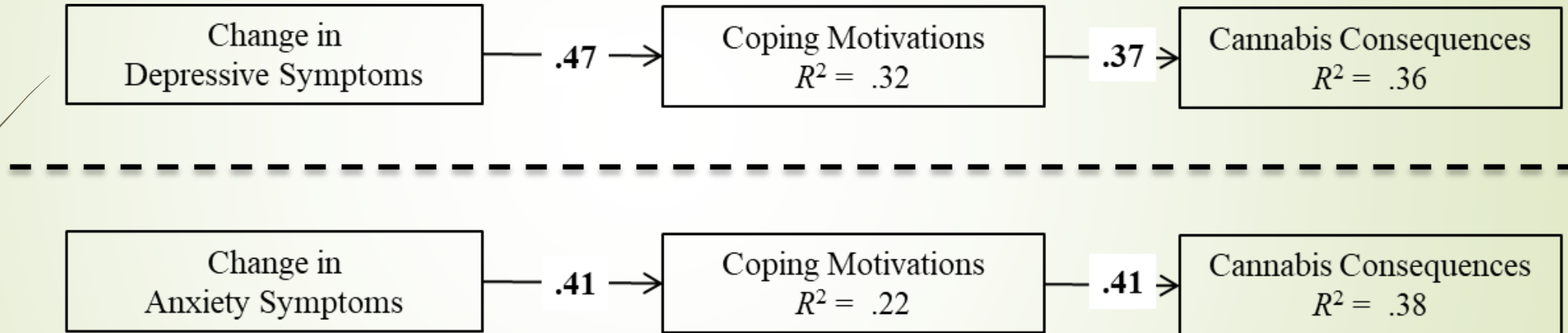
Outcome Variable:	Remained the Same (<i>n</i> = 126)	Increased (<i>n</i> = 174)	<i>t</i>	Cohen's D
Cannabis Coping Motives	1.78 (0.98)	2.78 (1.43)	t = -7.12	0.79
Cannabis Use Frequency	4.62 (7.13)	6.21 (8.33)	t = -1.73	0.20
Cannabis Consequences	2.56 (2.99)	4.03 (4.54)	t = -3.40	0.37

Changes in Anxiety Symptoms due to COVID-19

Outcome Variable:	Remained the Same (<i>n</i> = 106)	Increased (<i>n</i> = 185)	<i>t</i>	Cohen's D
Cannabis Coping Motives	1.97 (1.17)	2.59 (1.41)	t = -4.05	0.47
Cannabis Use Frequency	5.82 (8.28)	5.38 (7.46)	t = 0.47	0.06
Cannabis Consequences	2.85 (3.67)	3.69 (4.18)	t = -1.79	0.21

Study Results

► Mediation Models



Discussion of Findings

- Majority of participants reported an increase in anxiety/depression symptoms compared to remain the same or decrease due to COVID-19
- Students reporting an increase in internalizing symptoms reported higher cannabis coping motives and more negative consequences
- Students who reported an increase in depressive/anxiety symptoms reported more cannabis consequences via higher endorsement of cannabis coping motives

Discussion of Findings

➤ **Limitations & Future Research**

- All of the data collected was self-reported and cross-sectional
- We only examined a few factors that may influence relationships between COVID-19, mental health, and cannabis use outcomes
- Researchers should also explore how COVID-19 has impacted mental health and drug use of among vulnerable student populations as well as clinical populations

Need for Cross-Cultural Research

- COVID-19 impacted the entire world
- Poor mental health and problematic substance use is a global issue
- Are these etiological pathways universal or culturally-specific?

Cross-Cultural Addictions Study Team (CAST)

- CAST is a collective of international scientists with a shared vision of answering meaningful research questions regarding addictive behaviors (predominately substance use) that have important global policy, prevention, and/or treatment implications

CAST

United States of America



Spain

Canada



England

South Africa

New Zealand

Argentina

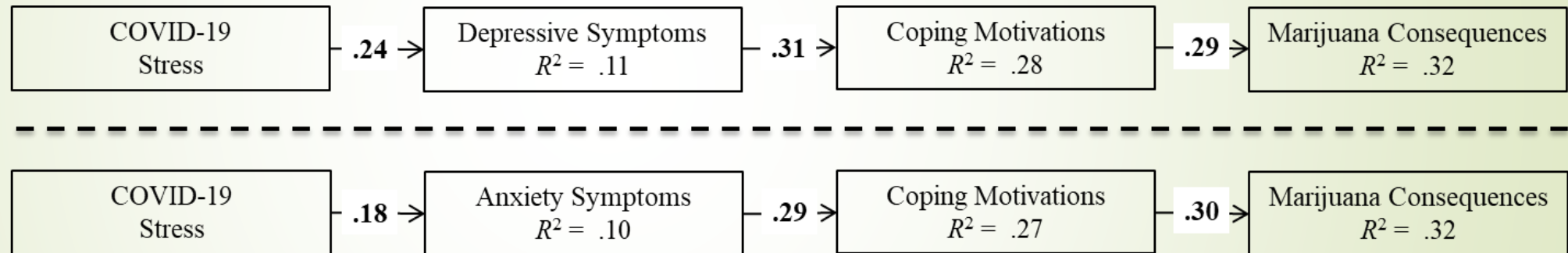


Project Cross-Cultural Longitudinal Assessment of Stuff Study (CLASS)

- The purpose of this study is to longitudinally replicate and extend research examining etiological models of substance use and mental health among young adults (i.e., college students) in multiple countries (i.e., Argentina, England, Spain, South Africa, Canada and the U.S.)
- Also collecting data on the impact of COVID-19 on mental health and substance use

Study Results

► Preliminary Project CLASS Results



Conclusions

- ▶ College students reporting mental health struggles due to COVID-19 are turning to cannabis to alleviate their struggles; however, this increased motivation to use cannabis to cope is associated with more experiences of negative cannabis-related consequences
- ▶ Providing resources for substance-free coping strategies to manage the mental health impact of COVID-19 may be extremely useful



Thank You!
Questions?

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Thank You!

CADCA wishes to thank
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