

Problematic Social Media Use and Substance Use as Mediated by Pro-Substance Content on Social Media

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Introduction

- **Social media** has become the **primary space** for **connection, entertainment, and boredom relief** for numerous adolescents and young adults today.
- The **negative and problematic use of social media** has been associated with **adverse mental health outcomes** (depression, anxiety, and stress) and **higher rates of substance use** (alcohol, marijuana, and laughing gas) in **adolescents** [1,3].
- **Exposure to social media content**, specifically **pro-substance use content**, increased the likelihood for **non-user adolescents** to **initiate substance use** [2,4,5].
- There is a **substantial connection** between **social media, mental health outcomes, and substance use** in **adolescents**. Although, recent studies and research on samples of **young adults** (aged 18-34) are **sparse**.

Purpose & Hypotheses

- The present study will examine whether the association between problematic social media use and substance use in young adults (aged 18-34) are mediated by exposure to pro-substance use content.
- We hypothesized that **pro-substance use content** on social media will significantly mediate the association between problematic social media use and substance use (alcohol, cannabis) in young adults.

Methodology & Analyses

Participants: 71 young adults (ages 18–34) residing in Oklahoma. Recruitment were recruited via social media advertisements from April-December 2024.

Procedure: After providing informed consent, participants completed an **online baseline survey** assessing substance use, social media activity, and mental health. All surveys were completed via REDCap. Participants earned up to \$200 for completion

Measures: Social Media Disorder Scale (e.g., In the past year how often have you felt bad when you could not use social media?)

Past-month alcohol use (how many days alcohol was consumed and how many drinks)

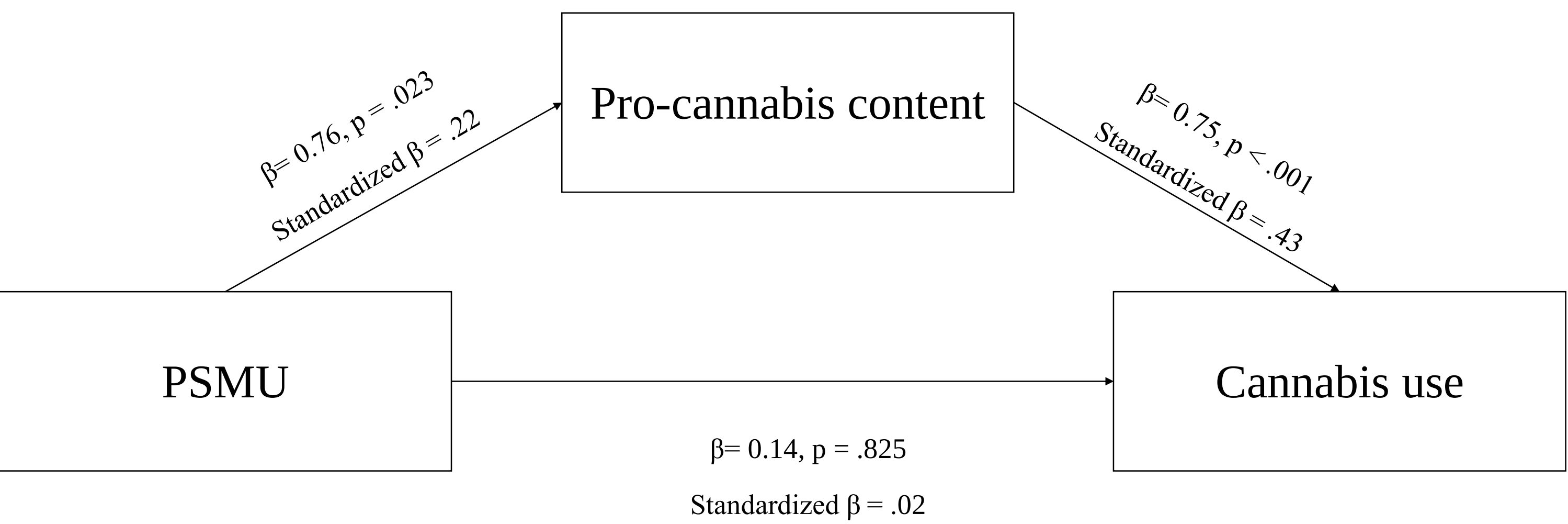
Past-month cannabis use (how many days cannabis products were used)

Exposure to pro and anti-cannabis social media messages and teens’ and college students’ intentions to use cannabis. (e.g., On how many of the past 30 days did you see posts about currently using cannabis or being high?)

Analyses: Two structural equation models were conducted in Rstudio 2025.09.1+401 to examine the mediation effects

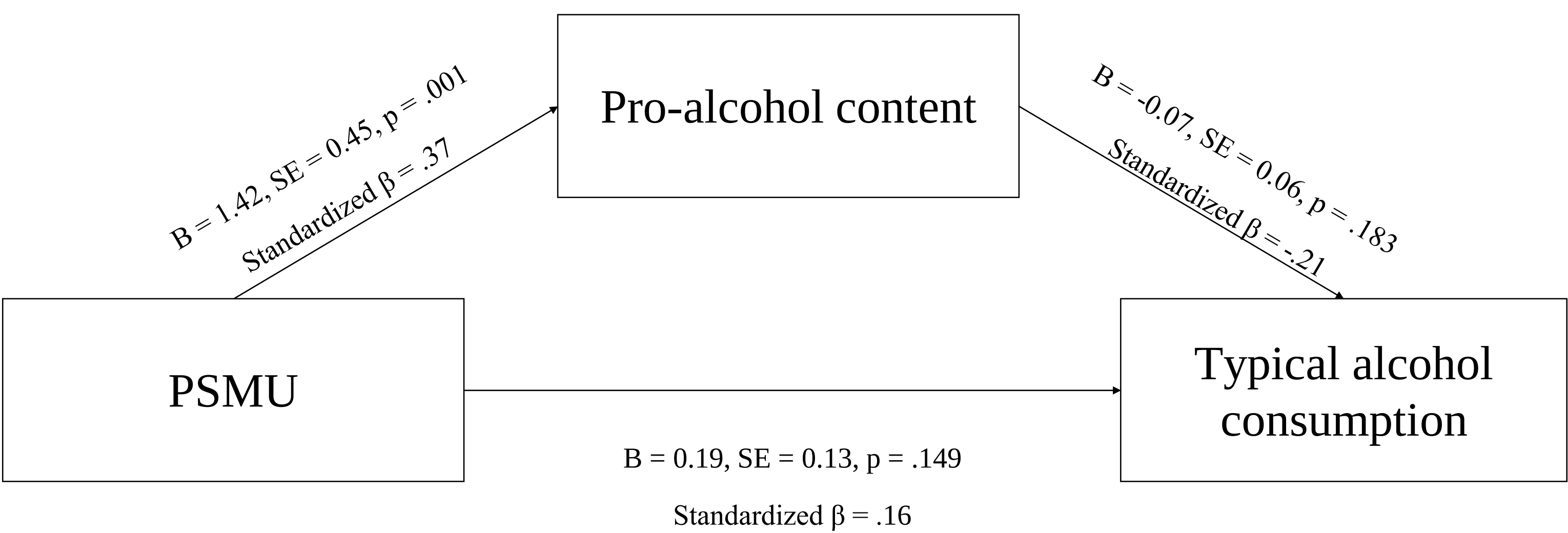
Results

Model 1: Mediation model for Problematic Social Media Use (PSMU), Pro-cannabis content, and Cannabis use



- PSMU significantly predicted greater exposure to pro-cannabis content. **Specifically, individuals with higher PSMU scores reported seeing more pro-cannabis content.**
- **Exposure to pro-cannabis content significantly predicted greater cannabis use when accounting for PSMU**
- After accounting for pro-cannabis content exposure, PSMU was not directly associated with cannabis use.

Model 2: Mediation model for PSMU, Pro-alcohol content, and Typical alcohol consumption



- PSMU significantly predicted greater exposure to pro-alcohol content. **Participants with higher problematic social media use reported seeing more alcohol-related content.**
- Neither the direct association between PSMU and alcohol consumption nor the indirect pathway through pro-alcohol content reached statistical significance. Thus, there is no evidence that exposure to pro-alcohol content explains the relationship between PSMU and alcohol consumption in this sample.

Discussion & Clinical Implications

- **Neither models exhibited a statistically significant mediation effect**
- Those who use social media problematically may be at an increased risk for cannabis use in adults partly because of the associated exposure to pro-cannabis content, though further research is needed to clarify the associations and identify other potentially relevant variables
- Previous research examining the associations between PSMU and substance use typically utilized adolescent populations. It is possible that the mediation models do not represent or encompass the holistic picture of those variables in our sample of young adults.
- Clinicians should consider screening for social media use and specifically ask about what kind of content their clients are viewing

Limitations and Future Research

- The **small sample size** (N=71) may have been **insufficient** in detecting a **statistically significant indirect effect**; subsequent research should aim **to pursue a larger sample size to detect a true mediation effect.**
- **Geographic restrictions** in sampling young adults in Oklahoma may also **limit validity** due to the state’s **unique regional culture, local cannabis laws, and state public health campaigns**; future research should aim to capture findings of **young adults from other regions of the United States.**
- Future research could utilize **longitudinal designs** to assess whether **PSMU leads to increased exposure to pro-substance use content** and later, **increased substance use consumption in young adults.**

References

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