



# The Correlation Between Stress Levels and Cannabis Dependency of Young Adults

Owen Gerah, Quantitative Analysis Center, Wesleyan University

## Introduction

- As more and more young adults have been exposed to marijuana, it has been noted that 3300 teens try weed for the time daily.
  - Nearly 40% of students in high school have experimented with marijuana, and almost 53% of marijuana users, 18 or older, used it for the first time in their early teen years (National Center for Drug Abuse Statistics).
- 60% of participants in a statewide secondary school sample that followed students for seven years (aged 14-15) in Victoria, Australia had used cannabis by the age of 20 and 7% used daily.
  - Those who used daily were at the highest risk of reporting anxiety as a result (Patton et al. 2002).
- While many young adults smoke marijuana recreationally, there is a major tie to utilizing it as a means to relax and escape worries in their lives (NBC News, 2024).

## Research Questions

- Is there a significant relationship among young adults between stress levels and cannabis dependency levels?
- Is this relationship moderated by biological sex?

## Results

### Univariate

- Figure 1: Cannabis Use Levels in Young Adults
- Distribution of the levels: 8.6% uses once a year, 9.7% uses 2 times a year, 6.3% uses seven to eleven times a year, 10.3% uses once a month, 11.2% uses two to three times a month, 13.1% uses one to two times a week, 7.4% uses three to four times a week, 7.4% uses nearly every day, and 14.03% uses every day.

### Bivariate

- Figure 2: Whether or not respondents were stressed over a 6+ month period by Cannabis Use
- ANOVA analysis indicated that there was not a significant relationship ( $p=.505$ ) between the variables chosen
- Although analyses showed that the association between stress levels and cannabis dependency was not significant, there was still a greater reliance of cannabis use among those who have had a 6+ month when they felt stressed.

### Multivariate

- Logistic regression between stress levels (stress1) and cannabis usage (canuse1) revealed the same p-value, again signifying an insignificant relationship as well as an odds ratio of .981, meaning that for each one-unit increase in cannabis usage, the odds of high stress decreases.
- Amongst males, the relationship between stress and cannabis use is near even as those who responded affirmatively to having had a 6+ month period of stress and those who didn't. Alternatively, for females, there was a greater association between having this 6+ month period of stress and cannabis use.
- Logistic regression found that after controlling for sex, the relationship between stress levels and cannabis usage ( $p=.421$ ) is not significant.

## Methods

### Sample

- Young adults (age 18 to 25) who represent the national civilian, non-institutionalized adult population ( $n=1,334$ ) were drawn from the first wave of the National Epidemiologic Study of Alcohol and Related Conditions (NESARC).
- Due to the high saturation of adults who begin smoking cannabis at a young age, the following analyses seek to underscore the true reality of how prevalent the dependency can be as it pertains to rising levels of anxiety. In doing so, this analysis looks at 1,334 respondents who will demonstrate how closely connected these two are.

### Measures

- Social anxiety disorder prognoses were based on the Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS) and the Comprehensive International Diagnostic Interview (CIDI), which were both rooted in DSM-IV criteria.
- Any feeling of tenseness/nervousness/worriedness were all measured by the question: "Ever had a 6+ month period felt tense/nervous/worried of time?" The responses were coded dichotomously, with 1 (yes) and 2 (no).
- Cannabis dependency, alternatively, looked into the frequency of usage for each respondent. More specifically, "How often used cannabis in the last 12 months." This categorical variable's responses were listed in a range that spanned from every day to once a year.

### Multivariate, Cont.

- Additionally, the logistic regression's odds ratios elucidated that the odds of higher stress decrease by a factor of .02 for one unit increase in cannabis use holding all other variables fixed.

## Discussion

- Individuals with higher stress levels are not more likely to use cannabis at a higher frequency, even when controlling for biological sex.
- These findings are surprising yet absolutely call for further research into other possible moderators such as respondent's background, religious affiliations, etc.
- These findings are obviously limited when considering that the NESARC data set utilized was collected in 2001 and will obviously not be fully representative of modern-day feelings towards cannabis use amidst a wide range of legality state to state.
  - That being said, accessibility to cannabis may play a role in modern-day young adults' consumption of the substance as a coping mechanism for stress.

## References

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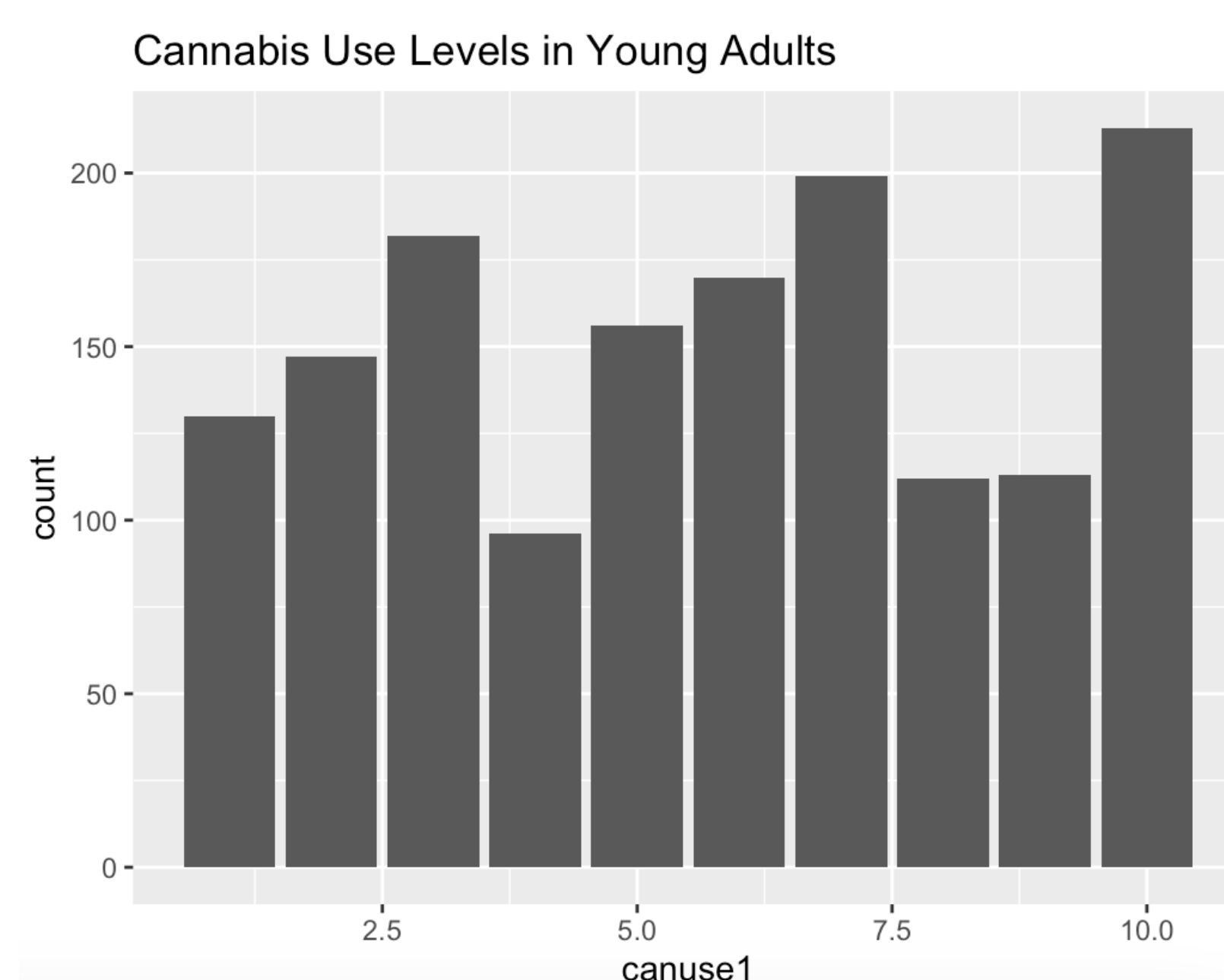


Figure 1. Cannabis Use Levels in Young Adults on a range from 1-10

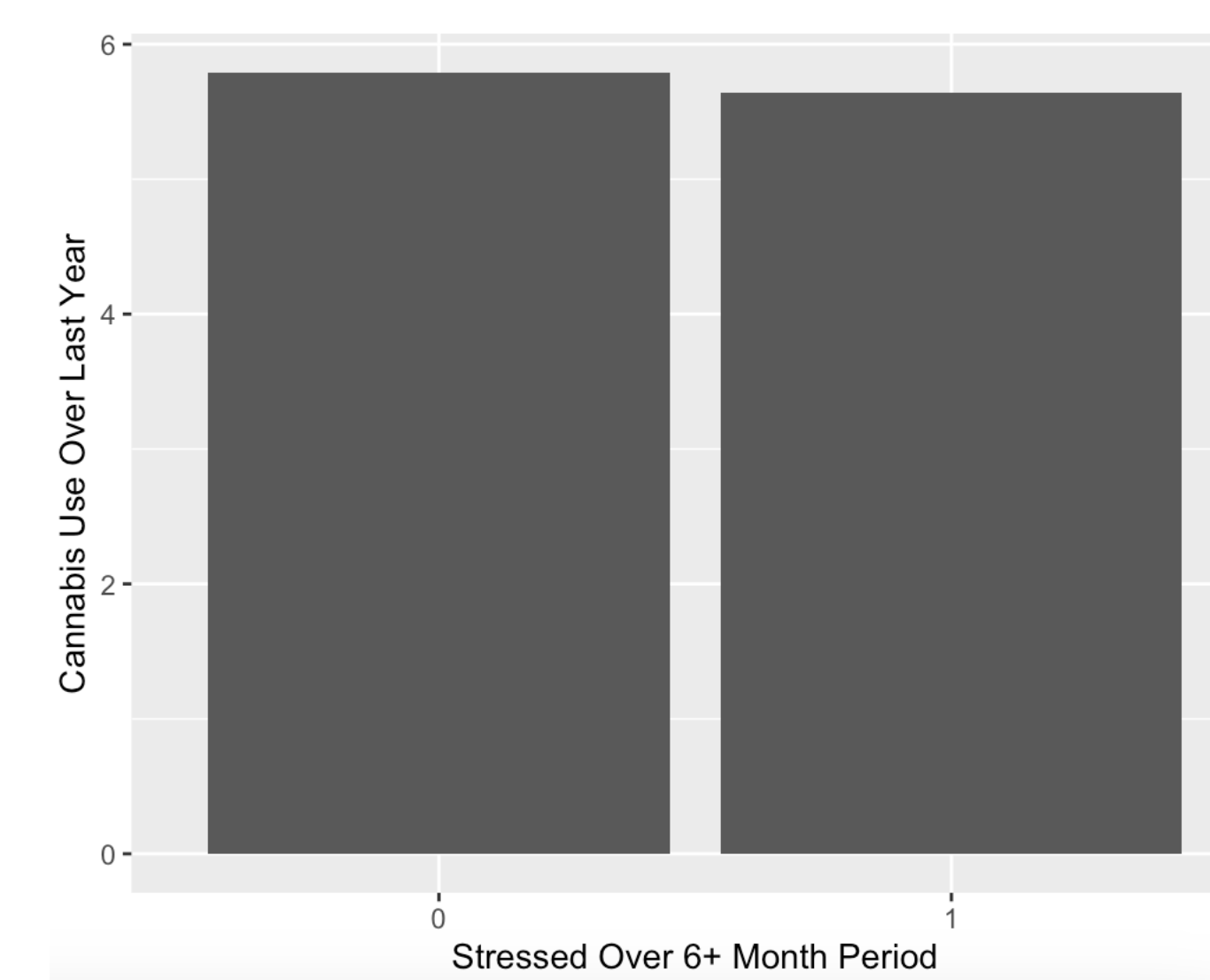


Figure 2: Stressed Over 6+ Month Period by Cannabis usage among young adults

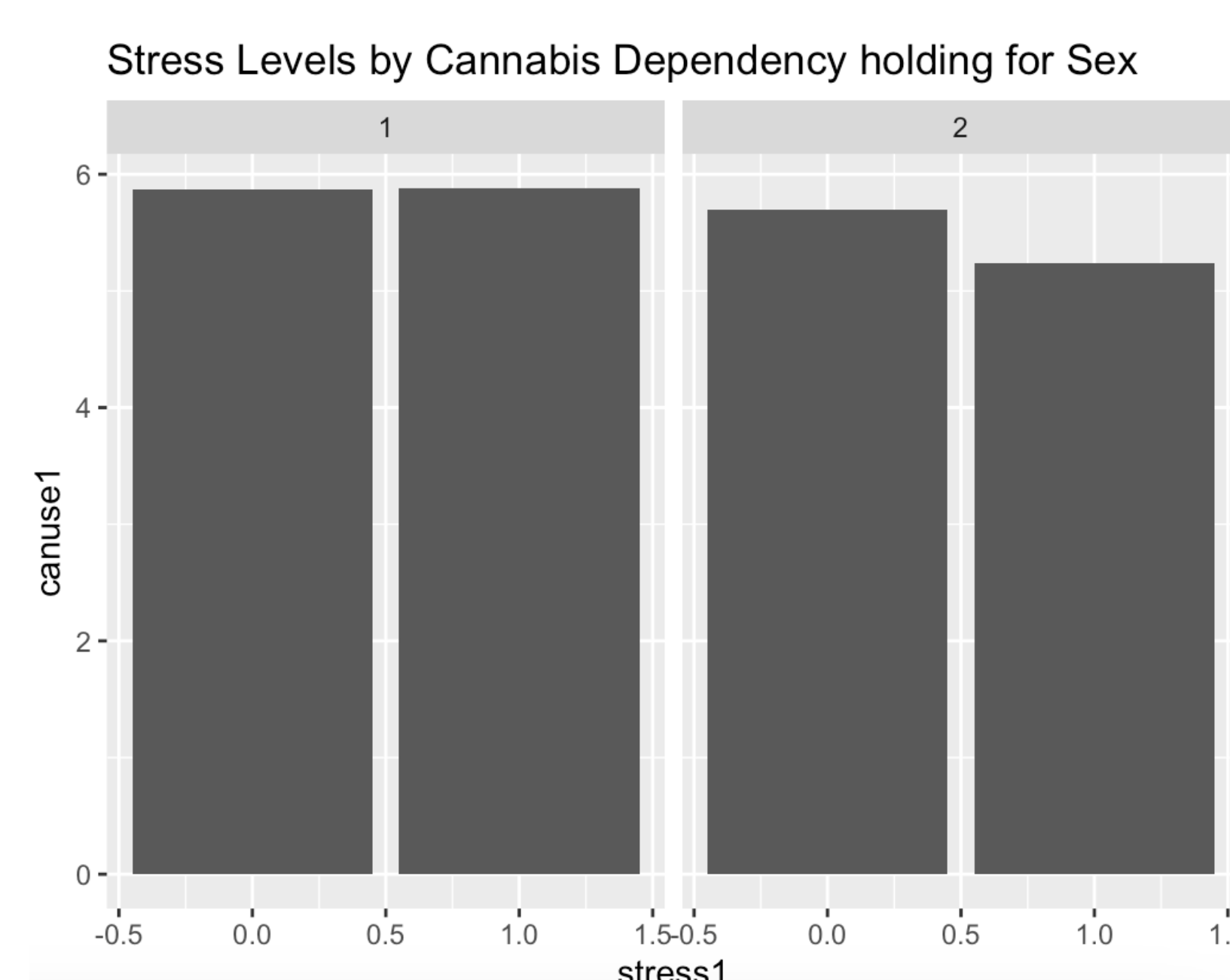


Figure 3. Stress levels by Cannabis Dependency controlling for Sex