The Association Between Anxiety and Cannabis Use Disorder

Zuhayr Masud, Applied Data Analysis, Wesleyan University

Introduction

- There is a complex relationship between the anxiety and cannabis use, as some studies have shown no association between anxiety or future use of cannabis (Feingold, et al. 2016), nor an association between cannabis use and future development of anxiety (Xue, et al. 2021).

- However, neither study considers external factors (life stressors).

- The present analysis will consider external life stressors, and how it affects anxiety and cannabis use, as well as if they lead to an increase in cannabis use. Further, it will examine if experiencing more stressful events leads to cannabis use rather than fewer.
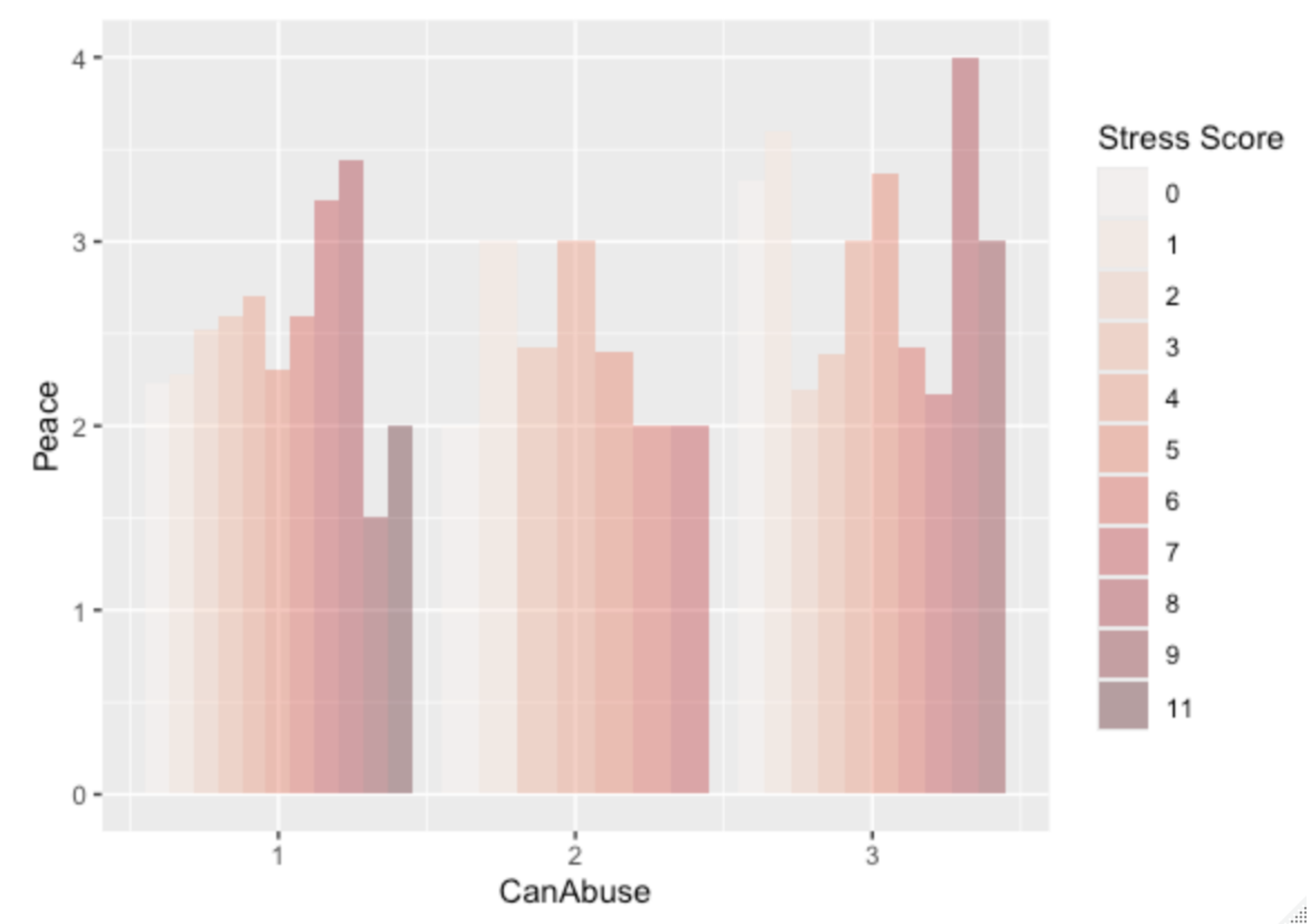
Research Questions

- How is cannabis use associated with anxiety?
- How do recently experienced stressful life events moderate this association?

Methods

Sample

- Respondents (n=43,093) were drawn from the first wave of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). It included over sampling of Blacks, Hispanics and young adults aged 18 to 24 years.

Measures

- Cannabis abuse/dependence was measured by placing individuals into buckets of no cannabis diagnosis, cannabis abuse only, cannabis dependence only, or both cannabis abuse and dependence.

- The stress score was based on how many stressful events, out of 12, the individual experienced. These were coded dichotomously in terms of experiencing or not experiencing the event.

- Peace/anxiety was measured as an ordered category, with the question "during the past four weeks, how often have you felt calm and peaceful?" Possible responses ranged from 1 (most of the time) to 5 (none of the time).
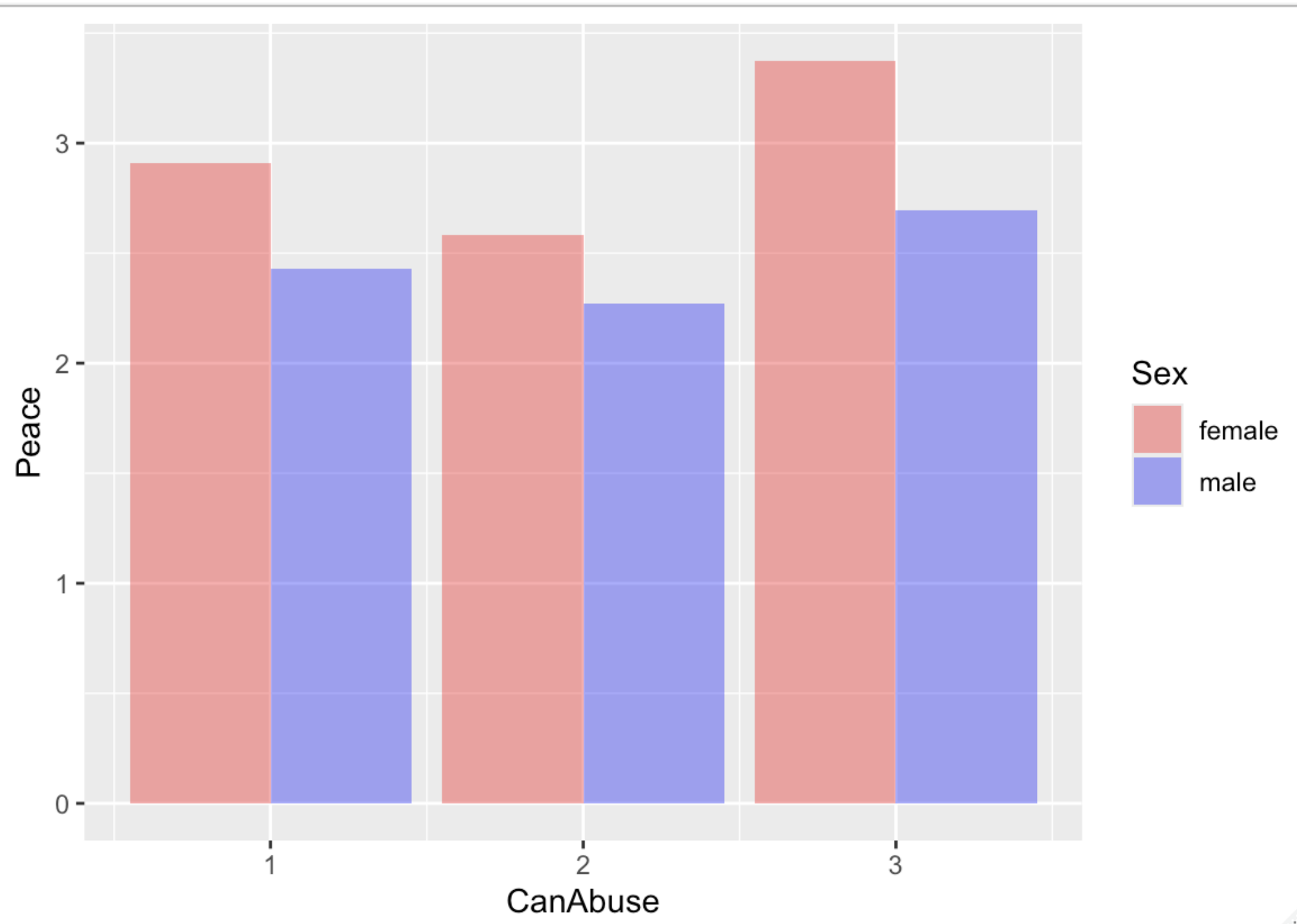
Results

Bivariate

- Cannabis abuse status was not significantly associated with self-reported feelings of peace (p = 0.058).

- Stress scores were significantly higher for individuals meeting criteria for both cannabis abuse and dependence compared to those with abuse only (p< 0.001).

Figure 1: The Effect of Cannabis Abuse & Sex on Peace Outcomes

Figure 2: Stress Scores by Cannabis Diagnosis Category
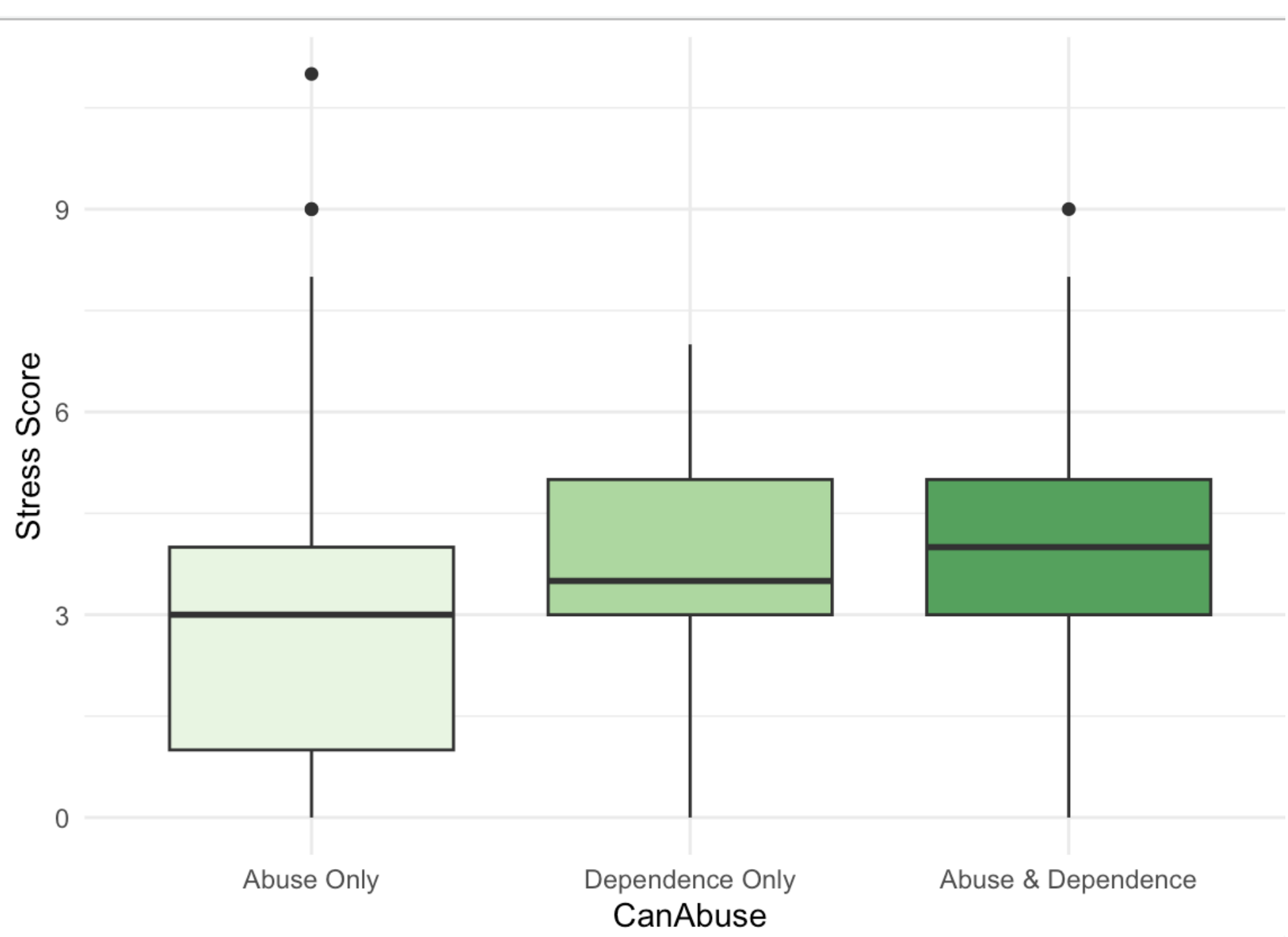
Figure 3: The Effect of Cannabis Abuse & Stress Scores on Peace Outcomes

Multivariate

- Controlling for sex, multiple regression analysis shows higher cannabis abuse and stress scores are associated with increased peace scores.

- The strength and significance of these associations vary depending on the stress level.

- Cannabis is significantly associated with peace (p = 0.037). R-squared is 5.4. Stress score of 8 is the significant score (p = 0.0014).

Discussion

- The relationship between Peace and Cannabis Abuse was significant in multivariate model (confounders).

- Inclusion of life stressors and sex in a multivariate model reveals a significant association.

- "Tipping point" of stress

- While the model is significant, it only explains a small portion of the variation in Peace scores.

- The low R-squared value shows the limits of the study and calls for further research.

- Peace score proxy limitation

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