



# Preliminary Effects of a Facebook Intervention on Polysubstance Use and Transdiagnostic Psychological Symptoms Among Adults with Cannabis Use Disorder and Major Depression

Kiefer Cowie<sup>1</sup>, Helene Chokron Garneau, Ph.D.<sup>2</sup>, Anne Bellows Lee, LCSW<sup>1</sup>, Melissa Garcia<sup>1</sup>, Frances Kay-Lambkin, Ph.D.<sup>3</sup>, Alan Budney, Ph.D.<sup>4</sup>, Alfonso Ang, Ph.D.<sup>1</sup>, and Suzette Glasner, Ph.D.<sup>1</sup>

UCLA Integrated Substance Abuse Programs<sup>1</sup>, Stanford University<sup>2</sup>, The University of Newcastle<sup>3</sup>, and Dartmouth University<sup>4</sup>



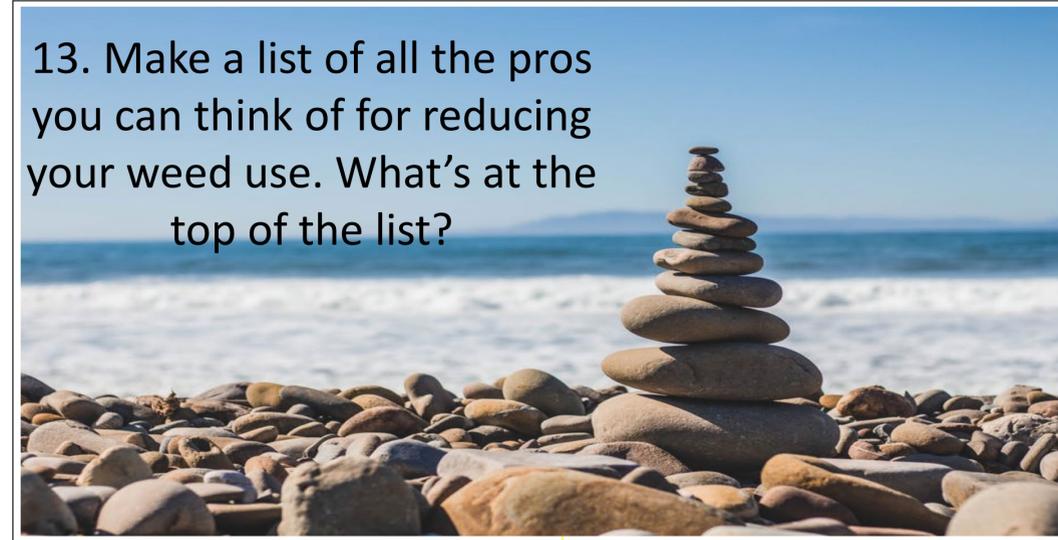
## Introduction

- Cannabis Use Disorders are associated with quadrupling the risk of developing depression (Patton et al., 2002), and cannabis use to alleviate depressive symptoms is increasingly widespread (Sarvet et al., 2018). Despite high rates of cannabis use among people with affective disorders, those who suffer from depression infrequently access traditional treatment (Hasin et al., 2016).
- Our prior work demonstrated technology- and social media-assisted interventions combining cognitive behavioral therapy (CBT), motivational enhancement therapy (MET), and social media support via Facebook showed promise in changing cannabis use and mood symptoms among depressed individuals with Cannabis Use Disorders.
- The current project examined alcohol co-use and anxiety in this population, effectiveness of this approach in changing drinking behaviors and anxiety, and perceived helpfulness of the intervention.

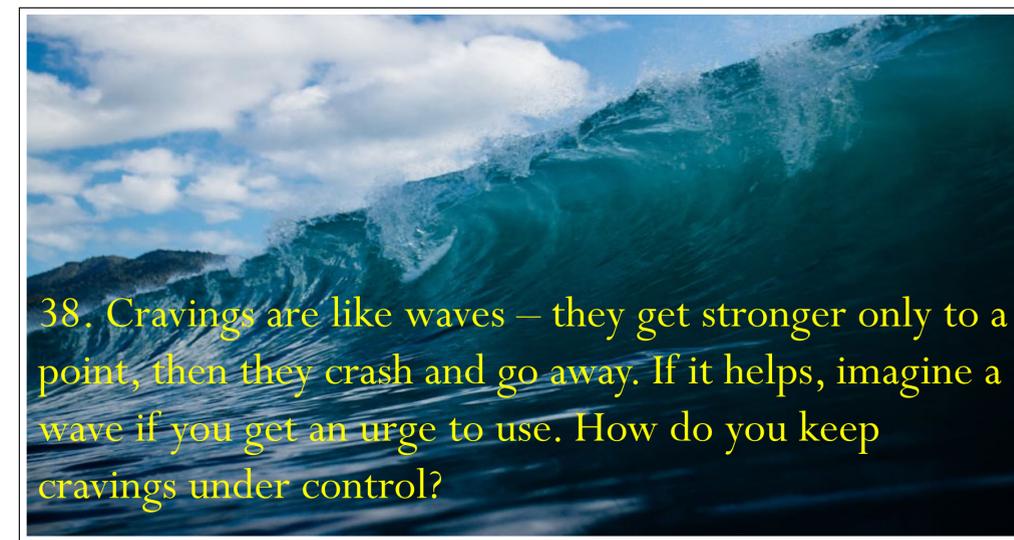
## Methods

- In a 10-week pilot intervention study, adults (N=20) with CUD and Major Depressive Disorder (MDD) received an intervention combining computer-assisted CBT/MET targeting depression and cannabis use with peer and therapist support via Facebook, **Connected Cannabis Users' Network for Enhancement of Cognitive Therapy (CONNECT)**.
- CONNECT comprises daily posts in a private Facebook group over 10 weeks, and a weekly Facebook Chat Session, "The Dr. Is In."
- Self-reported past 30-day alcohol and cannabis use were assessed using a calendar-assisted timeline follow back interview at baseline and treatment end. Anxiety was measured using the GAD-7. Participants perception of the intervention usefulness was evaluated qualitatively during individual interviews.
- Eligibility criteria: (1) age  $\geq 18$ ; (2) DSM-V diagnosis of cannabis use disorder and lifetime major depressive disorder; (3) able to read and understand English at or above the 6<sup>th</sup> grade level; (4) cannabis use on at least 40 of the past 90 days; (5) score of 9 or higher on the Current Patient Health Questionnaire-9 (PHQ-9).

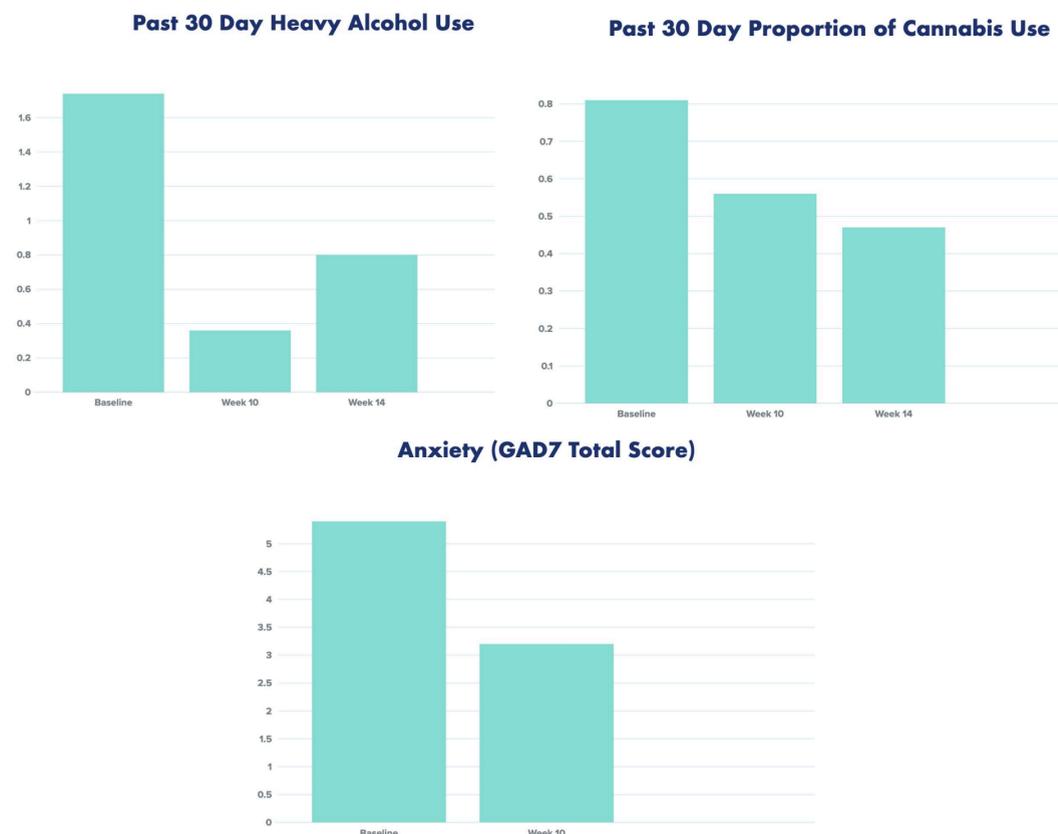
## Sample Post



## Sample Post



## Results: Primary outcomes



## Results

- From baseline to treatment-end, participants reduced the frequency of both cannabis use (M=24 vs. 8.9 days,  $p < 0.05$ ) and heavy alcohol use (M=1.7 days vs. 0.4 days,  $p < 0.05$ ).
- Anxiety declined over the course of treatment (M=5.4 vs. 3.2,  $p < 0.05$ ).
- More than half (57%) of participants reported the social media intervention was helpful for their mood as well as cannabis use, and 72% indicated that they would recommend it to a friend.
- Participant qualitative data indicated the following 3 core areas as most helpful: (1) social support/not feeling alone with their problems, (2) CBT skills training, and (3) bolstering motivation to change substance use.

## Conclusions

- Combining technology-assisted and social media interventions may be an effective strategy for populations struggling with concurrent depression and CUD.
- In addition to reducing CU and Depression, participants also reported reductions in heavy alcohol use and anxiety, indicating this intervention may effectively produce transdiagnostic process changes

### References

1. Patton, G.C., Coffey, C., Carlin, J.B., Degenhardt, L., Lynskey, M., & Hall, W. (2002). Cannabis use and mental health in young people: Cohort study. *BMJ*, 325(7374), 1195-1198. PMID: 1244653

2. Sarvet AL, Wall MM, Keyes KM, Olfson M, Cerda M, Hasin DS (2018) Self-medication of mood and anxiety disorders with marijuana: higher in states with medical marijuana laws. *Drug Alcohol Depend* 186:10–15

3. Hasin, Deborah S, Kerridge, Bradley T, Saha, Tulshi D, Huang, Boji, Pickering, Roger, Smith, Sharon M, . . . Grant, Bridget F. (2016). Prevalence and Correlates of DSM-5 Cannabis Use Disorder, 2012-2013: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions-III. *The American Journal of Psychiatry*, 173(6), 588-599.

**Acknowledgment:** The research presented herein was supported by NIDA Grants 1R56DA036718 and R21DA042627 awarded to S. Glasner.