

## ABSTRACT (A)

Individuals with opiate use disorder (IOUD) are more susceptible to psychiatric comorbidities, and 17-30% have anxiety (Sofuoglu et al., 2019). Research (Wolitzky-Taylor et al., 2018) indicates that anxiety interferes with the ability for individuals to maintain their treatment goals and have positive outcomes. The purpose of the study is to evaluate a virtual mindfulness intervention in individuals on buprenorphine naloxone (Suboxone) maintenance.

### Methodology

The Generalized Anxiety Disorder Scale-7 (GAD-7) was used to measure anxiety pre and post intervention.

### Results

There was a difference in the pre and post-anxiety scores  $t(4)=2.813, p<.05$ , showing improvement after the intervention.

### Implications for Practice

This may be a viable intervention to remotely treat anxiety and other psychological disorders for individuals with substance abuse.

## DISCUSSION (G)

Results indicate that participants' anxiety decreased as a result of the mindfulness intervention.

Mindfulness is beneficial for anxiety because it reduces physical tension and improves emotional self-regulation (Viglas & Perlman, 2018).

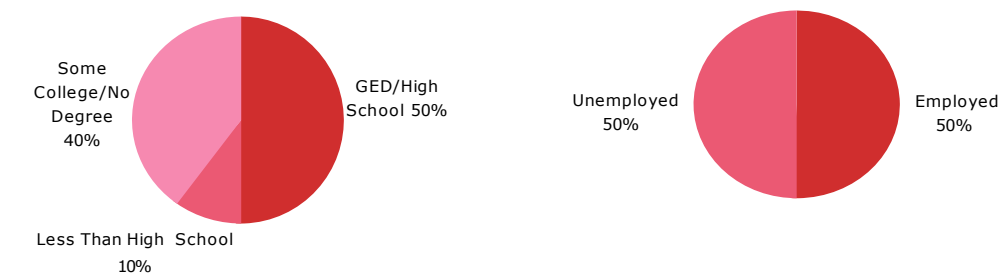
Online mindfulness apps may be a simple and cost-effective way to address anxiety in substance abusers.

Overall, mindfulness seems to be most helpful to participants who have less acute addiction and have maintained some stability and are higher functioning. Mindfulness was less helpful for participants who are more acute and/or unstable because they found the time commitment too demanding.

Overall, most of the participants found the intervention helpful and plan to use it in the future.

### Limitations

- Small sample size
- Compliance with substance use population



## BACKGROUND (B)

Anxiety is one of the most common comorbid disorder (Sofuoglu et al., 2019) among individuals with OUD (opiate use disorder), 40% have psychological diagnoses (Litz & Leslie, 2017).

The presence of a comorbid psychological disorder results in poorer patient outcomes, greater severity of opiate dependence, and a higher likelihood of treatment interruption and dropout (Wolitzky-Taylor et al., 2018).

There is an urgent need for treatments that address comorbid anxiety and opiate use disorder (OUD). Most studies and treatment centers only address one disorder at a time (Velandar, 2018).

There is also a need for treatments that are easily accessible. Online smartphone interventions can be valuable assets for comorbid individuals.

The purpose of the study was to evaluate the effectiveness of a 6-week smartphone-based mindfulness treatment in opiate dependent individuals with anxiety.

## IMPLICATIONS / FUTURE DIRECTION (H)

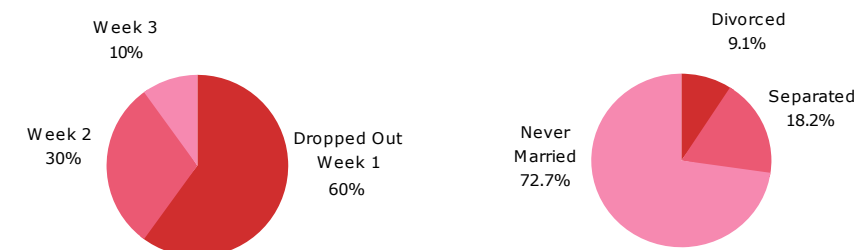
This project can be a gateway for treating patients online.

Organizations similar to the one in this study can implement this self-directed mindfulness intervention as part of their regimen in their programs.

This intervention can be used for low-income populations that cannot access transportation or obtain leave; for patients that are homebound because of disability, age, or illness; and for patients in rural areas who don't have access to treatment centers.

Patients who are acute may benefit from a shorter mindfulness intervention or more clinician direction. An assessment tool like the Addiction Severity Index (ASI) can help clinicians tailor a mindfulness intervention to patients' needs (McLellan et al., 1992; 2006).

Future studies can replicate this research with larger sample sizes and with individuals who use different substances.



## METHODS (C)

### Design

Pre and post quality improvement study.

### Sample

Individuals 18 or older on Suboxone maintenance with anxiety measured by GAD-7 with a score of 5 or more.

\* N= 15, N=5 for those who completed the program

\* Male and Female participants.

### Setting

A small community behavioral health center in Toms River, NJ.

### Measures

Generalized Anxiety Disorder Scale (GAD-7) scores.

### Intervention

UCLA Mindful app: A six-week mindfulness mobile application intervention. The focus is on reducing anxiety through meditative exercises.

### Analysis

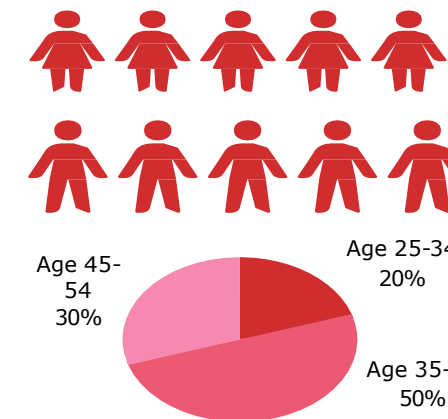
A Paired T-Test will be used to compare the differences between pre and post.

## RESULTS (D)

Paired T-test: Comparison of Pre & Post-GAD Scores

t	Df	P-Value
2.813	4	<0.05

Participants who completed the mindfulness program showed statistically significant improvement in anxiety scores.  $t(4)=2.813, p<.05$ .



## QUALITATIVE (E) RESULTS

### DO YOU THINK THE MINDFULNESS EXERCISES HELPED YOU WITH YOUR ANXIETY?

- Four participants said "Yes"
- One participant said "NO"

### WHAT DID THE MINDFULNESS EXERCISES HELP YOU WITH?

- "It helped me to focus on the present moment and not focus on the past or worry about the future as much."
- "I was able to keep my mind focused on just the meditation, nothing else"

### HOW DO YOU THINK THE STUDY CAN BE IMPROVED?

- "The study should be no longer than 3 weeks."
- "It was way too long to hold the attention of someone battling with addiction."
- "It would have been easier if I could have just checked in when I went to see my therapist."

### WILL YOU CONTINUE TO USE THESE EXERCISES IN THE FUTURE?

- "I will use them to escape my racing thoughts and panic that causes my restlessness."
- "I meditated daily prior to the study, and will continue with the mindfulness exercises going forward."
- "I will meditate 4-5 times a week."

## QUALITATIVE FEEDBACK FROM PARTICIPANTS THAT DROPPED OUT (F)

Dropout Week	Gender	Age	Education	Employment	Marital Status	Feedback as to Why Participants Dropped Out
1	Female	45-54	GED/High School	Unemployed	Never Married	*
1	Female	35-44	Less Than High School	Employed	Never Married	"I am not in good place right now. I am struggling just to stay clean and stay on my Suboxone maintenance program."
1	Female	35-44	GED/High School	Unemployed	Divorced	"I am caring for my sick mother, so between this study, my problems, and taking care of her, it is just too much for me right now."
1	Female	35-44	Ged/High School	Unemployed	Separated	*
1	Male	35-44	Some College/No Degree	Employed	Never Married	"Between working and having my kids on the weekends. The study is just not my priority at this time."
1	Male	25-34	Some College/No Degree	Employed	Never Married	"I am just trying to stay clean. I can't concentrate on this right now. I am just a drug addict trying to make it one day at time."
2	Male	45-54	GED/High School	Employed	Never Married	"I have chronic pain I have to deal with that right now."
2	Male	35-44	Some College/No Degree	Unemployed	Never Married	*
2	Female	25-24	Some College/No Degree	Unemployed	Never Married	"I am working two job and this more than I what I thought I was signing on for."
3	Male	45-54	GED/High School	Employed	Separated	"I didn't know the study was going to be this long, and I do a lot of stuff on the weekend that prevents me from attending this weekly meeting."