

## Abstract

Mindfulness plays an evidence-based role in the treatment of Substance Use Disorder but with limited success, and Virtual Reality has the potential to improve its training with immersive guided mindfulness practices. To explore the effects of practicing mindfulness via VR on the emotion regulation of patients undergoing Substance Use Treatment, 38 patients were recruited from CeDAR. For quantitative measure, participants were inquired about how they felt on a scale of 1 (worst) to 10 (excellent) before and after each practice. For qualitative measure, participants were then asked to select a mood descriptor. On a per-use basis, an increase of +0.95 (SE = 0.08). On a per-day basis, an increase of +0.93 (SE = 0.10,  $p < 0.001$ ). There was also a positive shift in the connotation of the descriptors participants selected to describe their mood. While this study had its limitations, it highlights the potential for a novel technology to aid patients with SUD in regulating their emotions and potentially cravings. There is a need for further research on the adherence to different therapy modalities presented via VR and the persistence of their effects in non-clinical environments, like their homes, over a longer period.

**Keywords:** Virtual Reality, mindfulness, substance use, residential treatment, addiction, recovery