

VR & Mindfulness Snapshot

What does mindfulness in VR look like?

- Practicing mindfulness in VR typically involves transporting users to visually-pleasing locations around the world to practice different types of mindfulness.
- Users can customize their experience:
 - Environments: select from different spots to practice like a beach or forest
 - Audio Guides: select different types of guided practices that include mindfulness-based stress reduction (MBSR), Zen Meditation, Loving Compassion, Focus, etc....
 - Music: select musical tracks to accompany the guided practice session
- Typically, users progress through a structured program with sequenced practices; some applications, however, are more “open-ended” and allow users to determine how to proceed through the content.

What is the rationale for practicing mindfulness in VR?

- Many people struggle with mindfulness when first getting started. It may sound easy to pay attention to the present moment, but our minds wander, and mindfulness can be frustrating in the beginning. With immersive environments that are visually beautiful to look at and can hold our attention, the “wow factor” can make getting started easier. Using VR for initial mindfulness training can be a good stepping stone for developing a more robust mindfulness practice.

What is the evidence?

- The evidence on VR and mindfulness is limited. In one study, meditation experts reported reduced negative emotions after listening to a dialectical behavioral therapy mindfulness exercise while floating down a virtual river (Navarro-Haro et al., 2017).
- Additional preliminary evidence comes from several small intervention studies. Two published case studies reported on reductions in negative emotions among two patients with spinal cord injuries (Flores et al., 2018), one patient with severe burns (Gomez et al., 2017) and one patient with borderline personality disorder (Navarro-Harro et al., 2016). Two small pilot trials on chronic pain also showed positive effects of VR mindfulness training: Patients with fibromyalgia (Botella et al., 2013) and chronic pain (Gromala et al., 2015) reported improvements on pain, depressive symptoms or negative affect following mindfulness training.
- The most intensive VR mindfulness program involves 8 sessions of MBSR paired with virtual environments. A small sample of participants who completed the program reported increases in life satisfaction and mindful awareness (Cikajlo et al., 2017).

Key Reference

Cikajlo, I., Staba, U. C., Vrhovac, S., Larkin, F., & Roddy, M. (2017). A cloud-based virtual reality app for a Novel telemindfulness service: rationale, design and feasibility evaluation. *JMIR research protocols*, 6(6).