COMPUTER SCIENCE + DESIGN

electronic visualization laboratory

You Can Grow Here

A Theraputic VR Journey for Anxiety Management

SIGGRAPH 2025
Vancouver+ 10-14 August

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Problem

Anxiety is one of the most widespread mental health issues, affecting nearly 30% of U.S. adults. In 2024, 43% reported feeling more anxious than the year before. Traditional treatments often require clinical settings, which can be costly, inaccessible, or intimidating [2]. There's a growing need for self-guided, engaging tools that support emotional regulation in everyday environments.

Related Work / Motivation

VR is emerging as a powerful tool in clinical anxiety treatment. At Princeton House, VR sessions led to a 35% reduction in anxiety [4], and CUCARD uses VR for exposure therapy in controlled environments like classrooms [1].
However, these tools rely on professional oversight and offer limited user agency. You Can Grow Here builds on this research by offering a non-clinical, self-directed VR experience–making emotional support more personal, immersive, and accessible.

Approach / Solution

We introduce an immersive VR experience that helps users manage anxiety through gamified, evidence-based calming techniques. Unlike traditional therapeutic methods that require clinical settings, our approach enables independent emotional exploration and regulation in an accessible, self-guided environment. By integrating interactions, and gameplay elements, our method improves engagement, encourages consistent practice, and offers a scalable alternative to in-person care–advancing the current state of mental health interventions.

Process

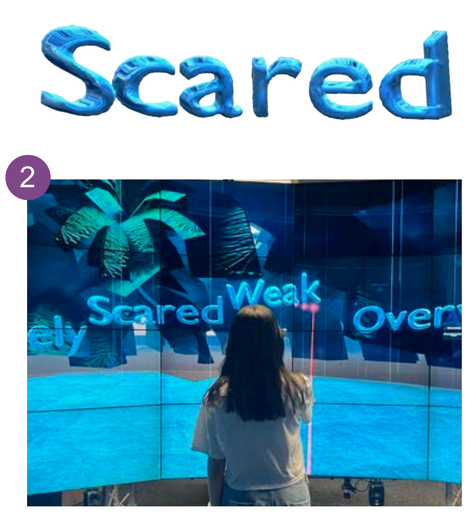
Our project followed an iterative design process centered on user feedback and therapeutic impact. Through frequent testing, we refined key elements such as lighting, sound balance, and interaction flow to enhance emotional engagement. Demonstrations leveraging improv theatre were used to prototype the user journey, ensuring each interaction supported our well-being goals. Weekly meetings and collaborative tools like Unity, Figma, and Discord enabled efficient teamwork. Continuous evaluation ensured alignment with our therapeutic objectives, fostering a meaningful and emotionally restorative experience.

Figure 1: Overview image of the island with key locations of scenes numbered.

Scenes

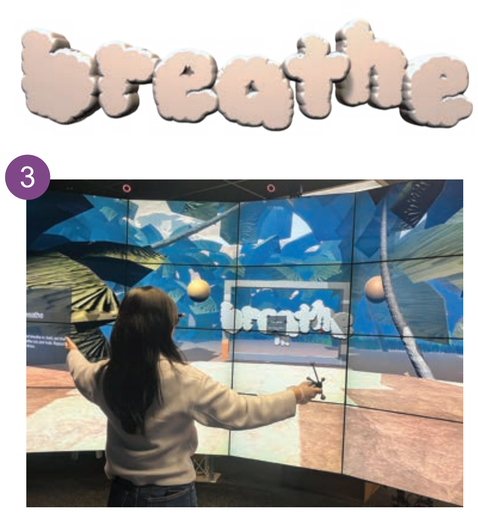
1

The introductory scene features a dark, gloomy environment symbolizing anxiety. Users engage with words that represent trapped emotions, creating a space to confront anxiety. The phrase "There's no exit" acts as a metaphor for the illusion of escaping emotions, emphasizing the importance of emotional exploration for healing.



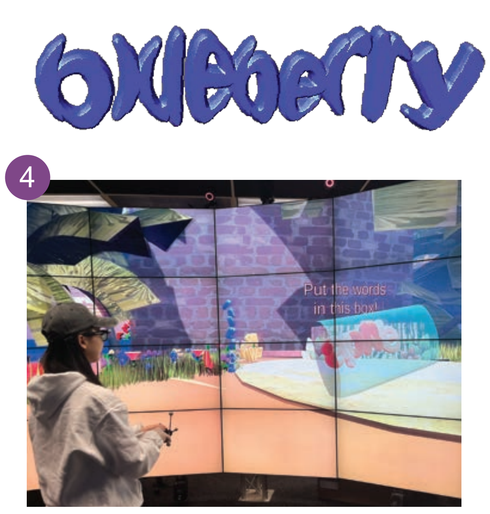
2

The second scene presents a rainy environment that clears up as the patient achieves a clearer emotional state and embraces emotional introspection and self-acceptance. Users interact with 10 fluid, words of water that of common anxiety-related emotions, washing them away in a rain effect when touched.



3

The third scene guides users though a breathing exercise, inspired by the box breathing and the 555 breathing methods. User can practice a deep breathing technique where spheres rise and fall with their breathing cycle with cloud-like typeface, a glowing light, and animations guiding users through this calming exercise.

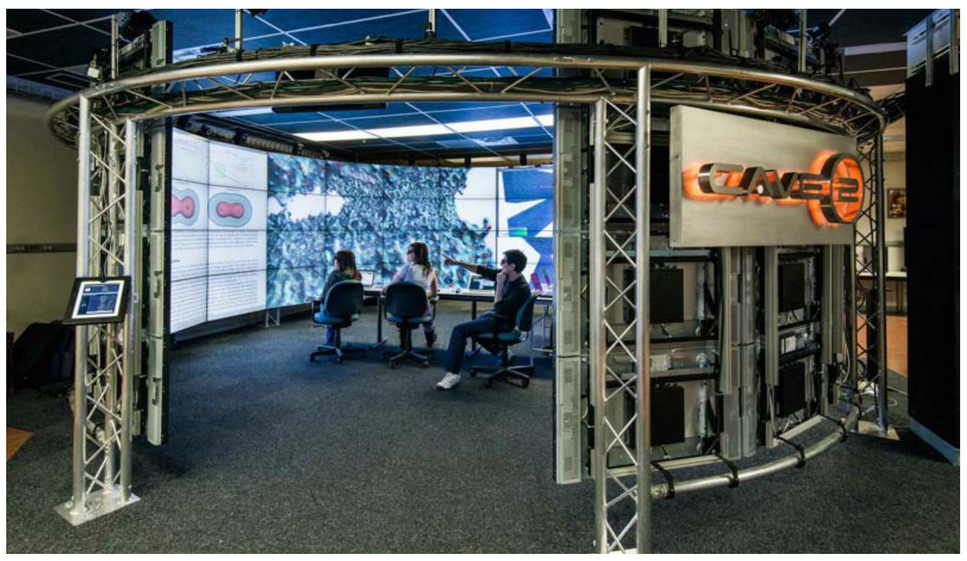


4

The last interaction scene features the 5-4-3-2-1 grounding exercise [5] where users engage with the grounding technique by identifying sensory cues, helping them focus on the present moment. Vibrant typography reinforces themes in emotional healing, encouraging users to reconnect with the natural world.

5

At the end of this healing journey, users see a beautiful rainbow, a symbol of peace, renewal, and new beginnings. Just like how a rainbow follows the storm, it symbolizes that courage has grown through the struggle. Users have faced their inner storm, and now, stronger and braver, user's are ready to embrace whatever comes next.



Special thanks to Professor Daria, Hal, EVL lab. This work was made possible through generous funding from the UIC Computer Science and Design department.

Results

Experiment: This project was exhibited in the CAVE2 VR Environment, "the world's first near-seamless flat-panel-based, surround-screen immersive system" [3] in the Electronic Visualization Laboratory located at UIC.

Procedure: Approximately 50 audience visitors provided live feedback about the project design and exhibition. Many visitors accounted feeling successfully immersed in our story, enjoying the diversity in exercises, and leaving with a sense of clarity and calmness.

Future Work

We plan on improving our project by conducting controlled user tests on the effectiveness of specific choices in interactions, typography, and other design elements.

References

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