You Can Grow Here

A Therapeutic VR Journey for Anxiety Management

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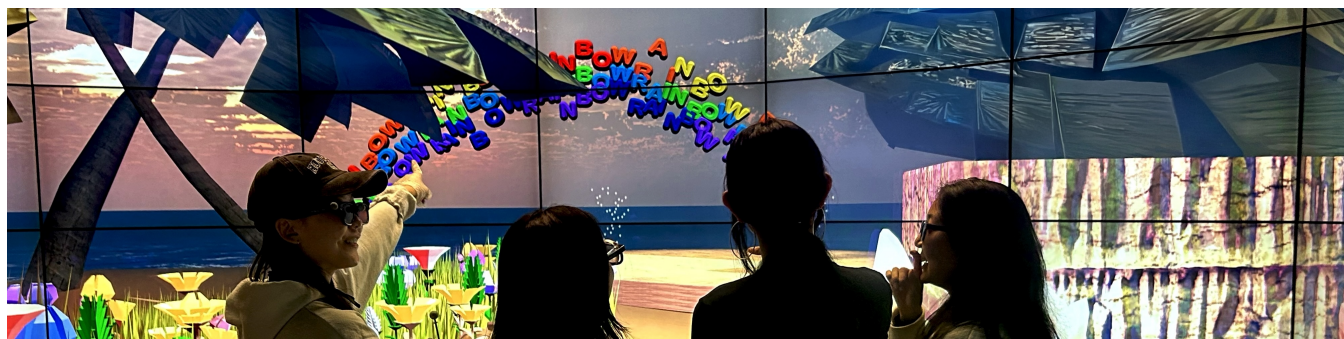Chicago, USA
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Figure 1: A glimpse of the final scene, where the rainbow represents peace, renewal, and emotional grounding.

Abstract

You Can Grow Here is an immersive VR experience developed for the CAVE2™ environment, aligning with the UN Sustainable Development Goal of Good Health and Well-Being. In response to the mental health challenges intensified by the COVID-19 pandemic, the project explores how interactive storytelling, ambient sound, and 3D typography can support emotional reflection and teach anxiety coping strategies. Built in Unity with custom assets from Blender and Maya, the experience differs from most clinical VR programs, allowing users to independently explore emotions, manage anxiety, and practice evidence-based calming techniques within a safe, narrative-driven space that builds emotional resilience.

CCS Concepts

• **Human-centered computing** → **Interaction design process and methods**; *Interaction design theory, concepts and paradigms.*

*All authors contributed equally to this research.

Keywords

Mental Health, 3D Typography, CAVE2, Good Health and Well-Being, Theater, Virtual Reality (VR)

1 Introduction

Anxiety continues to be one of the most prevalent and growing mental health challenges, with 43% of adults in 2024 reporting increased levels compared to the previous year. While traditional therapeutic approaches remain vital, there is a growing need for accessible, engaging tools that promote emotional awareness and coping strategies. This paper introduces You Can Grow Here (YCGH), a narrative-driven virtual reality (VR) experience that leverages interaction, storytelling, and design to foster emotional reflection and support mental well-being.

Existing VR-based anxiety interventions, such as Princeton House Behavioral Health's Coping with Anxiety Through Virtual Reality, have shown promising results, reporting a 35% reduction in anxiety through guided breathing, mindfulness, and calming imagery. Similarly, Columbia University's CUCARD clinic uses VR exposure therapy in simulated settings like classrooms and social situations.

However, these clinical programs require professional supervision and often offer limited user autonomy.

YCGH differs by providing a gentle, narrative-driven experience where users can independently engage with anxiety coping strategies such as 5-5-5 breathing exercise or the 5-4-3-2-1 grounding exercise. The experience is designed to be concise, emotionally engaging and accessible, offering users a quiet space to slow down, reflect, and build emotional resilience.

Figure 2: First interaction, confronting anxiety in a dark, typographic environment.

Figure 3: Second interaction, rain dissolves negative emotions.

2 Process

We used a user-centered design methodology grounded in immersive storytelling and interactive technology. The project was developed using Unity for VR integration, C# for programming interactive elements, and Blender/Maya for 3D modeling. Typography was a central design element: custom typefaces created in Adobe Illustrator were imported into Unity to add an expressive, emotional layer to the experience. The design process was iterative and feedback-driven. We collaborated closely with the IBM Global's Design+Theater team, sharing weekly progress through live presentations and prototype showcases. Each week, we received feedback from approximately 50 participants, which informed continuous refinement of the experience. We assessed emotional responses and user interactions directly in CAVE2, the immersive VR environment at UIC's Electronic Visualization Laboratory. This setting allowed us to observe user behavior and emotional engagement in real time. Feedback emphasized the importance of pacing, clarity of metaphor, and the emotional tone of the environment, all of which we adjusted accordingly before final implementation.

Figure 4: Third interaction, guided 5-5-5 breathing with calming visuals.

Figure 5: Fourth intereaction, sensory grounding in a vibrant, peaceful space.

The VR experience unfolds in four main scenes, each symbolizing a stage in anxiety recognition and emotional regulation. It begins with a dark, tense environment accompanied by shadowy music, where users confront anxiety by interacting with suffocating, typographic representations of overwhelming thoughts. In the second scene, the environment becomes rainy and fluid, where negative emotions appear as flowing words that dissolve in rain when touched, encouraging emotional processing and acceptance. The third scene introduces the 5-5-5 breathing exercise, visually represented by floating spheres that guide users through paced breathing. Calming typography assists in slowing down breath and refocusing. The final scene implements the 5-4-3-2-1 grounding technique, where users identify sensory elements in the environment, anchoring themselves to the present moment. This stage features vibrant visuals and uplifting music, symbolizing emotional recovery and reconnection with the natural world.

3 Conclusion

You Can Grow Here distinguishes itself from existing VR-based anxiety interventions through its integration of narrative, improvisational design, and interactive typography to guide users through a self-directed emotional journey. This study highlighted the difficulty of translating current anxiety mitigation practices into VR applications, requiring heightened attention towards design messaging and intensity in prioritization of patient sensitivity. Future iterations of the project aim to incorporate additional user feedback, expand modular functionality, and adapt the experience for varied audiences or clinical contexts.

Acknowledgments

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