

National Suicide Prevention Research Fund: Innovation Grant Summary Article

TITLE: Edge of the Present: A Virtual Reality Tool to Cultivate Future Thinking and Positive Ideation in Place of Suicidal Thoughts

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Reflections from our participants...

'I felt that it gave me a ... euphoric boost. That feeling of being in a beautiful place.' – [Female participant, HOTA]

'I went from my usual shallow breathing to – when the snow started falling – I was aware of my breathing, and it deepened, almost straight away. It's kind of like a half-way point between meditation and hypnotherapy. The snow brought it from something that was on my periphery to something that was around me... Hypnotherapy is good for me but it's also expensive, whereas this was for free.' – [Female participant, HOTA]

'The reason that I came here is because I have arthritis and I have a lot of PTSD... so, I can see that it can have a huge [impact]. I do feel quite calm right now, a lot calmer than when I

came in. It's like my brain has slowed right down. It's interesting... I have my tingling [after therapy]. I do... I have tingling. And my back pain – I have sacroiliac joint dysfunction and facet joint arthritis and I actually can't feel it right now. I have tingling just below where the pain was.... But I actually can't feel the pain right now. I felt it when I was parking the car but not now – wow, that's bizarre.' – [Female participant, HOTA]

'It was exhilarating... it was magic. It was over the top beautiful. It was a very pleasant, amazing experience. So many different forms of nature. I loved it. I'm in heaven... I feel peaceful. I feel happy. Serene. A magical experience. That just took me to another land, another place, with beautiful thoughts. I don't remember the last time I felt that way... '– [Female participant, HOTA]

A look inside...



Fig 1. Visual representation of participant (left) and research officer (right) exploring Edge of the Present



Fig 2. Edge of the Present features seven landscapes to explore. Featured above is the snow (left) and the alps (right).



Fig 3. Edge of the Present features seven landscapes to explore. Featured above is the interior of the virtual room (left) and the meadow (right).

The Evidence Gap

Diminished capacity for positive ‘future thinking’ and hopefulness increases suicide risk. Neuropsychologists report that suicidality is characterised by excessive negative thinking and poor positive future thinking – and that thinking in imagery (as opposed to words) has a powerful impact on emotion. This indicates the need for **interventions that cultivate positive future thinking and mental imagery**. Virtual Reality (VR) is a technology that offers users an immersive visual/sensory experience and provides a powerful means to address this challenge. VR has proven effectiveness for PTSD and schizophrenia, but is yet to be used in suicide prevention.

This study determined the potential of EOTP, an Australian, world-first VR application for suicide prevention, that was developed in workshops with individuals with lived experience expertise. EOTP works by immersing the participant in visual-experiential scenarios designed to induce strong positive affect/sensation in response to user actions. Co-developed with consumers with a history of suicide ideation, EOTP was designed to **promote the experience of positive future thinking**. Using mixed methods, this study explored the impact of EOTP on positive future thinking in participants with lived experience of suicidality.

Aim: Does 10 minutes in Edge of the Present improve positive future thinking, wellbeing and mood for those with lived experience of depression and/or suicidality?



Fig 4. Summary of data collection methodology for Edge of the Present

What did we do?

One hundred and thirty [n=130] research participants were recruited across three sites and were affiliated with suicide prevention/mental health organisations including: STRIDE, Roses in the Ocean, Mates in Construction, Australian Defence Force Veterans Network, and Headspace Tweed Heads/Maroochydore. The three implementation sites included **Home of the Arts (HOTA), Gold Coast** [n=48], **Warwick Art Gallery, Warwick** [n=61] and **QUT Gardens Theatre, Brisbane** [n=21]. This project was a mixed methods design aiming to measure hopelessness, wellbeing, and mood among those with *lived experience of depression and/or suicidality* via an online survey using psychometric tests, as well as exploring the impact of Edge of the Present on participants via one-to-one interviews.

What did we find?

Preliminary findings revealed that most participants were female (82 female, 44 male, 2 non-binary, and 2 other), with an average age range between 35–44 years (22.7% of total sample). Upon analysing the collective QLD sample, we found evidence of a statistically significant decrease in levels of hopelessness ($p < 0.001$) and negative mood ($p < 0.001$), with a subsequent increase in wellbeing ($p < 0.001$) and positive mood ($p < 0.001$). As was documented in our previous findings in 2019 [see here: <https://www.mdpi.com/1660-4601/18/1/140>], the results indicated that 10-minutes in Edge of the Present has the capacity to drastically improve mood and wellbeing, whilst subsequently reducing hopelessness and negative mood. Further to this, we found an even greater reduction in hopelessness scores amongst participants with lived experience of depression and suicidality ($p = .006$), as opposed to those who chose not to disclose their mental health status, as well as participants who had sought help for their mental health previously ($p = .002$).

Given the link between hopelessness and positive future thinking in parasuicide and depression, it is reasonable to assume that the study strongly affected those individuals with already lowered levels of anticipated positive future episodic thinking (Habak et al, 2021). Similarly, akin to our previous research, these findings further reinforce the power of imagery-based processing over traditional verbal processing methods of emotional material on negative and positive affect. Together, the results support immersive virtual reality technology as a potentially beneficial mental health intervention, offering new prevention and treatment possibilities to traditional approaches in suicide prevention.

What's next for Edge of the Present?

Interview data revealed two emerging themes regarding 'next steps' for Edge of the Present: accessibility and portability. As one participant suggested *'maybe you could have this in a workplace... you know, you could have a room set up where people could go and unwind or destress'*, whilst another endorsed Edge of the Present for home use, *'this would be really good to have at home, especially when I don't feel like seeing people or getting out... if my psychologist recommended me to do this at home, and then go to my appointments every other week, that would be really good.'* Upon speaking with participants who were first responders, their suggestions revealed EOTP use in crisis settings and/or hospital use. The team at UNSW Art and Design, alongside the research team at Black Dog Institute, are taking these findings into account and are discussing ways of improving Edge of the Present to address these shortcomings.

Feel like reading?

Habak, S., Bennett, J., Davies, A., Davies, M., Christensen, H., Boydell, K.M. (2021). Edge of the present: A virtual reality tool to cultivate future thinking, positive mood and wellbeing. *IJERPH*, 18(1), 140, 1–13.

Watfern, C., Bennett, J., Habak, S., Boydell, K.M. (2022). Edge of the present: Mixed reality, suicidality and future thinking. In Bennett, J. (ed.), *The Big Anxiety*, London: Bloomsbury Press. DOI: 10.5040/9781350297777.0010