New research finds virtual reality could help treat anxiety

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Virtual reality (VR) has been found to be an effective treatment method for anxiety, according to a new study, led by Computer Science Senior Lecturer Dr. Nilufar Baghaei and co-authored by Ph.D. student Vibhav

Chitale.

It examined the ways VR exposure and interventions have been used in the [treatment](#) of mental health conditions, the technologies used, and how effective they have been as a treatment method. The study was done in collaboration with Otago University Mental Health Clinical Research Unit, Auckland Institute of Studies, Otago Polytechnic Auckland campus, and Xi'an Jiaotong-Liverpool University.

The study has recently been published in the *Journal of Medical Internet Research* (JMIR) Mental Health and has already received media coverage, including an article in Psychology Today. The research team did a scoping review of articles published between 2017 and 2021 that looked at the use of VR as a treatment method for anxiety. They found that most studies demonstrated the use of VR to be effective for supporting the treatment of anxiety in a range of settings and recommended its potential as a tool for use in a clinical environment.

The authors say the use of VR in mental health is an innovative field that holds a lot of potential, and that it will be interesting to see where the field is heading. This is particularly the case as standalone VR headsets are becoming more affordable, and some sets allow researchers to collect and interpret participants' physiological data.

Dr. Baghaei is also leading a research project funded by the Massey Strategic Research Excellence Fund on intelligent individualized VR for supporting the treatment of depression. The idea for the project stems from the recognition that there is little research on using VR to support the treatment of depression, and very little work in offering patients an individualized VR experience. In addition to a number of external collaborators, several Computer Science students have been involved with various stages of the project's design and implementation, including masters student Ilona Halim and undergraduate student Sam Fleming.

The initial idea and findings of the project have been published at the ACM Conference on Human Factors in Computing Systems (CHI 2020) and the 13th ACM Special Interest Group on Computer-Human Interaction symposium on Engineering Interactive Computing Systems (EICS 2021).

The project uses the experience of an interdisciplinary team of researchers working at the interface of mental health, VR and artificial intelligence to enhance the quality of psychological treatments and improve mental health outcomes for New Zealanders. Dr. Baghaei says she believes the project could lay the foundation for using VR in treating mental health conditions in New Zealand. "We believe our contribution could pave the way for large-scale efficacy testing, clinical use and cost-effective delivery of intelligent, individualized VR technology for mental health therapy across Aotearoa New Zealand in the future."

More information: Nilufar Baghaei et al, Virtual Reality for Supporting the Treatment of Depression and Anxiety: Scoping Review, *JMIR Mental Health* (2021). DOI: 10.2196/29681

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