

Virtual Reality Exposure Therapy for Adults With Post-traumatic Stress Disorder: A Review

Context

Post-traumatic stress disorder (PTSD) is a chronic psychiatric condition that follows an exceptionally traumatic event. Common symptoms of PTSD include flashbacks and nightmares, avoidance of situations and things that are reminders of the traumatic event, and hyperarousal symptoms such as feeling irritable or angry, startling easily, or having difficulty sleeping or concentrating. In Canada, the lifetime prevalence rate of PTSD is estimated to be 9.2%. Certain groups, such as those exposed to military combat, are at a higher risk of developing PTSD.

Technology

Exposure therapy is a form of cognitive behavioural therapy that can be used to treat PTSD. This therapy involves repeatedly confronting memories or reminders of trauma in a safe and controlled environment to gradually reduce the distress associated with them. Types of exposure therapy include imaginal exposure therapy during which patients revisit events in their minds, in vivo exposure during which patients are confronted with real-life distressful situations, and prolonged exposure, which is a combination of both of these types of exposure therapy.

Virtual reality exposure therapy is a newer treatment for PTSD that builds on traditional exposure therapy. Patients recall traumatic events in an immersive and interactive virtual environment through the use of computer graphics and auditory cues, often using a head-mounted display device, which can be manipulated by the therapist or patient, as necessary.

Issue

Virtual reality exposure therapy is a relatively new treatment, and uncertainty remains about its effectiveness. A review of the clinical effectiveness of virtual reality exposure therapy for PTSD will help inform treatment decisions for patients with this condition.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Messages

For the treatment of PTSD, virtual reality exposure therapy may be as effective as other types of exposure therapy (based on limited evidence).

Results

The literature search identified 552 citations, with 3 additional articles identified from other sources. Of these, 33 were deemed potentially relevant and 2 met the criteria for inclusion in this review — 1 systematic review and 1 randomized controlled trial.

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