



Virtual Therapy

Virtual Exposure - Therapy for Post-traumatic Stress Disorder



Los Angeles, CA (Institute for Creative Technologies - Army) -- Psychologists can use virtual reality (via a special headset) to help people with Posttraumatic Stress Disorder (PTSD) by allowing them to re-experience the traumatic event in a safe and controlled environment. This technique is called exposure therapy. This type of treatment seems to draw in people who otherwise might not seek therapy. Other applications for this tool include diagnosing attention deficit disorder and facilitating physical therapy.

"This may draw in people to come to treatment who ordinarily might resist and suffer for the rest of their lives."

Skip Rizzo, research scientist

Framework

Middle School

Standards

- NSES - F.iv.2 ➤ Risks are associated with social hazards.
- STL - 3.F ➤ Knowledge from other fields has an effect on development of technology.
- STL - 4D ➤ Technology affects human safety and comfort.
- STL - 17.H ➤ Communication systems transfer information from human to machine and machine to human.
- STL - 17.J ➤ Messages are designed.

Content Illustrated

- Finding new applications for existing technologies, such as diagnosing attention deficit disorder.



Content

Medical Science

- PTSD is a clinical psychological condition that occurs when people cannot get over something that has happened to them. They continue to feel bad or worse about the event over a long period of time.
- A treatment known as exposure therapy has patients incrementally re-experience the traumatic event while talking to a therapist about what they are feeling. Gradually patients learn not to be afraid of the event and that it cannot hurt them anymore.
- After 10 sessions, 80 percent of patients make huge improvements.

Technology

- Therapists and their patients use a virtual-reality tool, including a virtual-reality headset, to simulate and control the environments that were traumatic.
- Virtual people, buildings, sounds, and other elements can be added or removed from the VR environment.

Engineering

- Additional applications for this VR tool have been developed, such as diagnosing attention deficit disorder and facilitating physical therapy.

Guiding Questions

- How many factors should the virtual reality headset include to become believable?

Suggested Activities

To think about as you watch:

- Develop different soundtracks for the same video to see how sound invokes different moods.
- Bring in a psychologist and school therapist to discuss further career opportunities.

Keywords

exposure therapy
Posttraumatic
Stress Disorder (PTSD)
psychologist
therapist
virtual reality
virtual-reality headset