Bravemind
Virtual Reality Exposure Therapy
2005-Present

Bravemind, ICT’s virtual reality (VR) exposure therapy system, is aimed at providing relief from post-traumatic stress (PTS). Currently distributed to over 50 sites, including VA hospitals, military bases and university centers, the Bravemind system has been shown to produce a meaningful reduction in PTS symptoms. Additional randomized controlled studies are ongoing.

Exposure therapy, in which a patient – guided by a trained therapist – confronts and processes their trauma memories through a retelling of the experience, has been endorsed as an “evidence-based” treatment for PTS. ICT researchers added to this therapy by leveraging virtual reality.

Now rather than relying exclusively on imagining a particular scenario, a patient can experience it again in a virtual world under very safe and controlled conditions. Young military personnel, having grown up with digital gaming technology, may actually be more attracted to and comfortable with a VR treatment approach as an alternative to traditional “talk therapy”.

The current application consist of a series of virtual scenarios specifically designed to represent relevant contexts for VR exposure therapy, including Afghan and Iraqi city and desert road environments, as well as scenarios relevant to combat medics. Scenarios addressing military sexual trauma are also being developed. In addition to the visual stimuli presented in the VR head-mounted display, directional 3D audio, vibrations and smells can be delivered into the simulation.

Specially trained clinicians control the stimulus presentation via a separate “Wizard of Oz” interface, and are in full audio contact with the patient.

Collaborators include JoAnn Difede, Weill Cornell Medical Center; Greg Reger, Madigan Army Medical Center; Barbara Rothbaum, Emory University; and Virtually Better, Inc. This basic and applied research effort is currently funded through TATRC.

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