[Virtual World Healing Real War Realities](https://www.npr.org/templates/story/story.php?storyId=88678421)

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FARAI CHIDEYA, host:

I'm Farai Chideya, and this is NEWS AND NOTES. We don't usually think of video war games as therapy, but researchers are finding way to use - finding way, how do you like that? We'll just start over: three, two, one.

I'm Farai Chideya, and this is NEWS AND NOTES. We don't usually think of video war games as therapy, but researchers are finding ways to use virtual reality to help soldiers deal with what they've experienced in combat. Skip Rizzo is a clinical psychologist and a research scientist at the Institute for Creative Technologies at University of Southern California. He's helped to develop a PTSD therapy he calls Virtual Iraq. Hi, Skip.

Dr. SKIP RIZZO (Clinical Psychologist, Research Scientist, Institute for Creative Technologies, University of Southern California): Thanks for having me.

CHIDEYA: So the idea of a virtual universe is to simulate reality for the viewer. And, in this case, does that mean really simulating war?

Dr. RIZZO: In order to treat PTSD effectively, we often rely on what's called exposure therapy, and that is to get people to revisit the trauma and to emotionally process those memories and the negative things that happened to them.

As long as you avoid re-processing these memories or re-experiencing them in a therapeutic fashion, they're going to continue to haunt you. So that is why we go to the trouble and expense to create a virtual Iraq environment in which the person can ever so gradually re-experience what they went through in Iraq, but in a safe, supportive environment in the clinician's office.

So, yes, we do replicate war, but not, of course, to the level of intensity, and certainly not at a level that is too much for a patient to handle.

CHIDEYA: Who, exactly, are the patients that you're dealing with?

Dr. RIZZO: We have a number of sites, but our primary research site is down in San Diego at the Naval Medical Hospital. This is a project that was funded by the Office of Naval Research. So we have active-duty naval and Marine personnel that are going through the treatment there.

But across the nation, we've got about 20 sites that work with people in the Army and Air Force, National Guard, Reservists and so forth.

CHIDEYA: So take me through an experience. If I were a patient and I sat down and put on these goggles that I've seen in newspaper accounts of what you're working on, what would I see? What would you tell me? What would you do if I panicked?

Dr. RIZZO: Right, right. Well, one thing to keep in mind is when you're in a virtual-reality environment, wearing a virtual reality head-mounted display, as you move your head around, the computer updates the graphics so that you get the sense of being immersed within whatever environment is modeled.

So we put a pair of headsets on a person, and they're also sitting on a base-shaker platform, so they actually can feel vibration. We also have a smell machine that pumps smells into the space that are relevant for what the person is going to experience. And, of course, we have good sound.

So when you're in the environment, you get the illusion that you're either going down a desert road through Iraq or you're walking through a desert city, through a marketplace, through ramshackle buildings and so forth, but we can systematically begin to ramp up the provocative nature of the environment.

So we can click a button, and a gunshot in the distance is heard or a gunshot right next to your head is heard, or an IED can be exploded, or an insurgent can come out from behind some palm trees, or the Humvee that's in front of you can blow up. So…

CHIDEYA: Well, Skip, let me ask you this. I mean, how do you decide who is eligible for treatment and who's responding? And have you ever had bad responses? I can imagine that you might.

Dr. RIZZO: Well no, we actually - so far in our research, we haven't had any situations where somebody yanks off the headset and runs out of the room. That never has happened. And I think that's more of a tribute to the therapists that are working in this area, and not necessarily to the technology.

A good therapist is monitoring the patient very closely, watching their heart rate, their skin conductance, their respiration. We record all of these physiological measures of stress, as well as they're in full audio contact with the patient.

Dr. RIZZO: The idea here is that you put a person in the environment at a level that they can handle with only a little bit of anxiety, and that eventually, that anxiety distinguishes or habituates, i.e., the person gets used to the environment, and then they're able to take on a little bit more.

CHIDEYA: You just had your first round of patients complete a full course of therapy, which I understand is 10 to 12 sessions, roughly. What were some of the results that you got from those patients?

Dr. RIZZO: Well, thus far, we're really encouraged with what we've seen. We've had 14 people go through the complete treatment, and of that number, 11 no longer meet the criteria for PTSD. And I don't want to, you know, over - go beyond that data, but I think that's rather encouraging, considering that these were active-duty participants that had just gotten back, had tried other forms of treatment without any success.

So, you know, we're feeling that we're on the right track, but we still have quite a bit more work to do in order to, you know, really validate that this is a successful treatment. But one thing to keep in mind is that the VR is a tool to deliver exposure therapy. And thus far, exposure therapy has been supported as the best-validated treatment procedure for PTSD of all forms of treatment.

This was documented by the National Academy of Science last fall and in other sources, as well. So what we're doing is we're able to do this exposure therapy, but in a much more controlled and a much more provocative fashion.

So I think we're resting on good ground, that we're operating from good theoretical principles and accepted treatment practices.

CHIDEYA: Skip, thanks so much.

Dr. RIZZO: All right, well, thank you.

CHIDEYA: Skip Rizzo is a clinical psychologist and a research scientist at the Institute for Creative Technologies at University of Southern California. He's part of a team working on virtual reality treatments for post-traumatic stress disorder. To see clips of Virtual Iraq, just go to our site: nprnewsandnnotes.org.