

第 101 回日本精神神経学会総会

シ ン ポ ジ ウ ム

Cyberpsychology in a Clinical Setting: Using Virtual Reality to Treat Storm Phobia, A Case Report

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Introduction to Cyberpsychology

With the advancement of technology, a new field called Cyberpsychology or Cybertherapy is developing at a rapid pace. Cyberpsychology can generally be described as using the internet, multimedia or virtual reality (VR) for the diagnosis and treatment of psychiatric disorders.

The use of virtual reality as a tool is seen in numerous medical applications. Virtual reality has been used to train physicians to perform complex medical procedures. It has also been applied as a tool for physical rehabilitation, pain control and remote treatments⁸⁾.

In psychiatry virtual reality has been used to treat simple phobias such as acrophobia⁶⁾, flight phobia⁷⁾, spider phobia²⁾ and claustrophobia¹⁾. Other uses for virtual reality are in the treatment of post-traumatic stress disorder, social anxiety disorder, body image disorders, and panic disorder.⁵⁾

The principle for using virtual reality in the treatment of psychiatric disorders is to create a three dimensional computer generated world in which patients can interact with situations relevant to their disorder. Most commonly the patient would be exposed to their feared object or situation. By using virtual reality instead of a computer screen, it becomes much easier for the patient to develop a sense of presence, the feeling of being in a real environment, not a computer world.

The use of a virtual world for exposure can have advantages over **imagined exposure**. Because it is a computer program, the content and situations that the patient **experience** are completely controlled by the therapist. There may also be some advantages over **in-vivo exposure**. In the early part of exposure therapy, the patient can enter a virtual world, and **feel safe** because it is not the real situation. After becoming comfortable with exposure in the virtual world, they can then move on to in-vivo exposure. One other merit of virtual reality **treatment** is that it is possible to create computer simulations for situations that are difficult to do **in-vivo exposure** for. Examples are thunder and lightning or flight phobias.

To treat patients with virtual reality, a special viewing device known as a head mounted display (HMD) is required. The HMD has 2 miniature display screens and speakers and is worn by the patient. In addition, there is a tracking device, which can sense the movement of the patients head