



Phobia Exposure Therapy using Virtual Reality

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Abstract: *Phobia is a disease caused due to many causes such as rabies, result of having a negative experience or panic attack related to a specific object or situation, or it may be genetic. Water phobia known as aquaphobia is also caused by inheritance or previous false experiences with water. Sometimes, the cause of this disease is eradicated, but the disease itself is a phobia therefore, it remains in the mind. These cases are taken to a psychologist or a psychiatrist, which causes individuals a lot amount of charges. Therefore, a cost-effective solution is needed for this critical issue. Therefore we used Virtual Reality as it creates an environment for any individual which is totally different from the current reality. This might prove to be a solution to the issue of Aquaphobia. Virtual Reality has the ability to render environments where an Aquaphobic individual can experience fearsome situations visually. Our proposed plan focuses on simulating different environments (levels) where fearsome environments of different intensity would be provided to the Aquaphobic people. While experiencing these environments visually, the individual would be in coordination with a pulse-rate sensor. This sensor, integrating with the application would provide a percentage on the removal of Aquaphobia for that respective level. If the amount crosses a certain percentage, then the patient would be able to move on to the next level. This project aims on reducing the effect of Aquaphobia, as the related diseases are removed but the phobias which are caused due to the diseases retain. In the future, the project aims to tackle Claustrophobia and Arachnophobia as well.*

Keywords: Virtual Reality, VR, Aquaphobia, Pulse rate sensor, Temperature sensor, phobia, exposure therapy, simulations

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