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Virtual Reality Therapy for Phobia

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ABSTRACT:

Fear is a sort of uneasiness clutter characterized by circumscribed, checked fear or uneasiness to a particular question or circumstance which is out of extent to the real threat postured by the concerned question or situation. The reason of this paper is to increment the understanding approximately the headway of Virtual Reality Treatment for Phobia.

There are two ways to treat Fear one is Introduction Treatment and other is the Cognitive Behavioral Therapy(CBT).Exposure Treatment combined with Virtual Reality makes the entire strategy of envisioning the circumstance a parcel less demanding, less time devouring and moreover viable.

Introduction:

A fear is a sort of uneasiness clutter that causes an person to involvement extraordinary, silly fear almost a circumstance, living animal, put, or question. When a individual has a fear, they will frequently shape their lives to dodge what they consider to be perilous. The envisioned danger is more prominent than any genuine risk postured by the cause of fear. Fear is an strongly, nonsensical fear of a particular trigger. These more often than not create some time recently the age of 4 to 8 a long time. In a few cases, it may be the result of a traumatic early encounter. One case would be claustrophobia creating over time after a more youthful child has an repulsive involvement in a restricted space around the world, the predominance of particular fear has been found to be around 5% in children and 16% in 13-17 a long time olds. In India, the predominance of phobic disarranges is roughly 4.2%.

Fear plans us to respond to peril. Once we sense a potential threat, our body discharges hormones that moderate or closed down capacities not required for survival (such as our stomach related framework) and moreover heart rate increments, and blood streams to muscles so we can run speedier. To treat fears there are talking medicines, such as advising, which are frequently exceptionally compelling at treating fears. In specific, cognitive behavioral treatment (CBT) has been found to be exceptionally viable for treating phobias.CBT is a sort of guiding that can offer assistance you oversee your issues by changing the way you think and carry on. It can be utilized to create viable ways of managing with your fear. The most common procedure is Introduction Treatment that, transposed to Virtual Reality, permits the understanding to confront a advanced adaptation of the dreaded question or circumstance, instep of a genuine or fanciful one.

Technology:

VR Headset: This is the most important piece of equipment, as it provides the visual and auditory immersion that is essential for VR therapy. VR headsets typically have two screens, one for each eye, and headphones that deliver spatial audio.

VR Headset



VR Therapy Software: The software creates the virtual environment that the client will experience. This environment can be anything from a safe space to a phobic situation, depending on the goals of therapy. VR therapy software is often designed to be used with a therapist who can control the environment and monitor the client's progress.

Motion Tracking Sensors: These sensors track the client's movements in the real world and translate them into movements in the virtual world. This allows the client to interact with the virtual environment in a more natural way.

Literature Review:

The thought of utilizing virtual reality innovation to combat mental clutters was to begin with conceived inside the Human-Computer Interaction Bunch at Clark Atlanta College in November 1992 and at that point it was distributed and named by Max North in July 1994. Behavioral treatment for treating fear incorporate Orderly desensitization but in a few investigate and surveys, it has been found that numerous patients show up to have trouble in applying creative techniques.VRT came as the modern approach to overcome these challenges. With offer assistance of VRT, it gets to be less demanding for such patients to envision the scenes of genuine situations.

Author Irene Fosu-Apraku, Yan Yan Lee, Amara Noll, Quip Zhao of Intrigue School of Wellbeing Sciences, College of Ottawa distributed a paper in 2015 where they concluded that VRET is found to be an viable strategy to diminish PTSD(Post Traumatic Stretch Clutter) and uneasiness side effects for military work force. Agreeing to the survey paper of Oswald D. Kothgassner & Anna Felnhofer, writing look blend centering on the utilize of VRET in children and youths is lacking.

Problem Definition:

Fears are mental issues patients enduring from a fear will continuously maintain a strategic distance from confronting their fears.That's why in the case of conventional treatment they will not effectively get comfortable in envisioning themselves in scenarios that bring fear in them. In these cases, VRET will be supportive for patients to confront their fear through virtual picturization.

Although VR is an viable treatment for treating fears, the issue with VRET is the peril of cybersickness which can as it were be caused since of drawn out periods of presentation to VR.Another issue is coming back to the genuine world from a virtual world, indeed if a quiet effectively combat the fear in the virtual world there is no 100 percent ensure that they are recuperated to confront their fear in the genuine world.

Research Methodology:

Inquire conducted on Virtual Reality Treatment on Fears is generally exploratory investigate with auxiliary data from a few distributed investigate papers ,articles and books

.This investigation is for more understanding of developing innovation of VRET,and to appear the rate of success.There are moreover a few case ponder specify in this paper which appears how VRET can be successful and moreover how it makes simple for a quiet to confront their fears.

Results of the Analysis:

There is an article on wildernesses in Brain research where they appear the result of a few investigation with nine ponders where were included, four on Particular Fear, three on Social Fear, and two on Agoraphobia, and they compared the VR treatment with vivo introduction and they concluded that there is no prove that VR treatment is less viable at that point vivo introduction therapy.

There is investigate paper by Cristiane M Gebara, Tito P de Barros-Neto ,Leticia Gertsenchtein, Francisco Lotufo-Neto where they specify the investigation done on Twenty one patients with conclusion of social fear who took portion in trial, treatment was of 12 session for 50 minutes and the result of sessions was enhancements in patients was seen in extraordinary scale. This think about gives prove that introduction to computer-generated three-dimensional pictures is generally reasonable, leads to more noteworthy treatment adherence, and can decrease social anxiety.

There is another article on wildernesses in Brain research where the comparison is done between conventional treatment and the VR framework "EMMA WORLD" in which patients can investigate negative encounters utilizing distinctive virtual components that can be customized to make them more important to the client .Their were two bunches was made one gather of proficient analyst and other bunch of patients. The patients bunch was partitioned into 2 bunches where one bunch treated with conventional strategy and other bunch treated with VR framework The patients were inquired approximately their desires (some time recently treatment) and fulfillment (after treatment) with the treatment they gotten. A more articulated pre-test–post-test alter in the EMMA treatment bunch than in the conventional bunch was observed.

Case Studies on VRT :

These case studies are first known controlled comprehensive study the effectiveness of the virtual environments technology Fear of Flying Experiments: The first experiment was the first pilot study which was conducted in late November 1992. The individual, who was 32 years old, was identified as having a phobia of flying.

.To investigate the transfer effect of VRT to the real world, she was flown with the therapist accompanying her on a helicopter for approximately 10 minutes at low altitude over a beach on the Gulf of Mexico.

As with the VRT sessions, she reported some anxiety at the beginning, but anxiety rapidly reduced to a reasonably comfortable level. Now the subject much more comfortably flies for long distances and experiences much less anxiety .

Agoraphobia Experiment :

This experiment, in which we conducted the first known controlled comprehensive study on the effectiveness of the virtual environments technology in the treatment of psychological disorders, commenced on February 1, 1993. Sixty subjects were selected for the experiment. Thirty individuals were assigned to the experimental group, and another thirty to the control group. Only those who were part of the experimental group saw the VRT. VRT was effective in the treatment of subjects with agoraphobia. Negative attitudes toward agoraphobic situations decreased significantly for the VRT group but not for the control group.

A picture from virtual reality therapy used for agoraphobia exposure. Paper written by Hunter G. Hoffman Restrictions: VRET treatment does not ensure that the patient is prepared to confront their fear in the real world, as limitations of the technology can demonstrate. Even if the patient manages their fear in virtual settings, this does not guarantee anything.

They also said that because of continuous exposure to the virtual world patients might suffer through hallucinations or cybersickness. But this is just the possibility that might happen or might not happen.





Fig : Virtual reality Exposure Therapy for agoraphobia Image from Virtual-reality Therapy Paper by Hunter G Hoffman

Conclusion:

Phobia is the fear of something or some situation someone might have this kind of problem from their childhood or someone may have developed it after some event in life.

While it's possible that we can eventually get over this, there are instances when treatment is required.

Person can get treated in traditional way of talking to a therapist as a consultant but it can be traumatic for some patients to go through the situation that they fear the most to save the patient from such pain and trauma the treatment can be made easier with Virtual Reality Therapy .VRET make imaging in the situation more easy and the scene can be customize according to the improvement of the patient .In it is explained how VRT is applying in medical field in terms of therapy for phobias ,but the emerging technology of Virtual Reality has a vast application in medical field.

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