A Hope for All: Reducing PTSD Symptoms in Refugees through a Physiologically-Driven Adaptive Home-Based Virtual Reality Exposure Therapy Treatment

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This study aimed to examine the efficacy of A Hope for All System on reducing post-traumatic stress disorder symptoms in refugees with combat related traumas through a physiologically-driven adaptive home-based virtual reality exposure therapy treatment. The study's methodology contained three phases. First, two different screening instruments were used to screen a sample of 120 refugees aged 7 to 15 for symptoms of depression and PTSD. Those who have fit the criteria were given a third instrument for trauma analysis. 50 patients were worked with under the supervision of a team of psychologists. Second, AHA System included the exposure simulations for each patient individually according to the stages of exposure in an application that is connected to a device that operates under specific body rates associated with the physiological and emotional arousals. If the rates became abnormal, required measures would be taken to calm the patient down. Third, the patients were given the PTSD screening instrument post-treatment and after a 1 month follow-up. The results showed that PTSD symptoms have been reduced in all patients from pre-treatment to after follow-up. Also, there was a statistically significant moderate relationship between the severity of PTSD symptoms and the average maximum pulse rate reached, which was (r = 0.72), and between the severity of PTSD symptoms and the average time needed for the pulse rate to go back to normal, which was (r = 0.5). Finally, according to Cohen's d Effect Size, there is a statistically significant large effect size from pre-treatment to after-follow up equal to (4.22) at a level of significance equal to (0.5), with an improvement rate equal to 55.24%. As a conclusion, AHA System was a high effective method at reducing PTSD symptoms.

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