IS VIRTUAL REALITY-BASED EXPOSURE THERAPY AN EFFECTIVE TREATMENT FOR FLYING PHOBIA? RESULTS OF A SYSTEMATIC REVIEW

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Abstract

Exposure therapy based on virtual reality (VR) has shown to be a successful intervention for fear of flying (FoF). However, further details about the specific features of this approach are required for the treatment of it. This systematic review's main goal was to provide information on the most beneficial methodological conditions for VR exposure treatment (VRET) by updating the current data on the treatment's effectiveness in FoF. The publications were selected using the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) approach. The databases PsycInfo, Medline, and Web of Science were chosen. This review includes thirty-three papers that met the criteria. The papers inclusion criteria were: 1) clinical or subclinical population with FoF, 2) evaluation of the efficacy of VRET for the treatment of FoF, and 3) written in English or Spanish. Academic articles, doctoral dissertations, book chapters, protocols, congress papers, and narrative literature reviews were not included. Results revealed that after being repeatedly exposed to VR environments associated with FoF, individuals' anxiety levels decreased. VRET is a highly recommended alternative to in vivo exposure therapy (IVET) when the last is difficult to administer. Adding motion to visual and auditory cues when exposed to VR settings may increase the efficacy of VRET for FoF, although further research is still required to confirm this statement.

Recent Publications

1. Botella, C., Fernández-Álvarez, J., Guillén, V., García-Palacios, A., & Baños, R. (2017). Recent progress in virtual reality exposure therapy for phobias: a systematic review. *Current psychiatry reports*, *19*(7), 1-13. https://doi.org/10.1007/s11920-017-0788-4
2. Jerdan, S. W., Grindle, M., van Woerden, H. C., & Boulos, M. N. K. (2018). Head-mounted virtual reality and mental health: critical review of current research. *Journal of Medical Internet Research* Serious Games, 6(3). https://doi.org/10.2196/games.9226
3. Ribé-Viñes, J.M., Gutiérrez-Maldonado, J., Zabolipour, Z., Ferrer-García, M. (2022). Virtual reality exposure through vibrotactile stimulation for the treatment of fear of flying: a pilot study. (Manuscript under review).
4. Roy S, & Kavitha R. (2017). Virtual reality treatments for specific phobias: a review. *Oriental journal of computer science and technology.* 10(1). https://dx.doi.org/10.13005/ojcst/10.01.18
5. Benbow, A. A., & Anderson, P. L. (2019). A meta-analytic examination of attrition in virtual reality exposure therapy for anxiety disorders. *Journal of Anxiety Disorders*, *61*, 18-26. https://doi.org/10.1016/j.janxdis.2018.06.006
6. Fehribach, J. R., Toffolo, M. B. J., Cornelisz, I., Van Klaveren, C., van Straten, A., Van Gelder, J.L., & Donker, T. (2021). Virtual Reality Self-help Treatment for Aviophobia: Protocol for a Randomized Controlled Trial. JMIR Research Protocols, 10(4).



Mr. José Maria Ribé Viñes is a person who is passionate about the evolution of the human species, which is why he frequently investigates and partakes in events which promote progress in this field. Autism and emotional disorders are two related challenges which are his area of expertise. Currently, works as a clinical psychotherapist with a primary focus on cognitive-behavioral therapy, as well as other psychological approaches including EMDR. Additionally, he researches the efficacy of vibrotactile stimulation employed during virtual reality interventions for fear of flying as a PhD student at the University of Barcelona. The prevention, promotion, and treatment of mental diseases rely significantly on updated knowledge and ongoing education.