The efficacy of a virtual reality exposure therapy treatment for fear of flying: A retrospective study

Meir Plotnik, Amihai Gottleib, Yara Hussein, Glen M. Doniger
Center of Advanced Technologies in Rehabilitation Sheba Medical Center
Ramat Gan, Israel

Meir Plotnik
Faculty of Medicine &
The Sagol School of Neuroscience Tel Aviv University
Tel Aviv, Israel

Contact Author: Dr. Meir Plotnik Meir.potnik@sheba.health.gov.il
Sheba Medical Center, Ramat Gan 52621, Israel

Abstract—Fear of flying (FoF) is an anxiety disorder classified as a phobia. Its prevalence is estimated at 10–40% in the industrialized world, and it is accompanied by severe economic, social, vocational and emotional consequences. In recent years, virtual reality-based exposure therapy (VRET) for FoF has been introduced. One such FoF-VRET is offered as a paid clinical service at the Center of Advanced Technologies in Rehabilitation (CATR), Sheba Medical Center, Israel. Positive long-term efficacy of FoF-VRET has been found in several studies. However, these studies are limited by relatively small, non-representative samples and a lack of comparative pre/post functional efficacy outcome measures. To address these limitations, we conducted a retrospective survey of self-referred individuals treated with FoF-VRET at CATR over the previous four years. The aim of the present study was to evaluate the efficacy of our FoF-VRET in this representative real-world sample. Of 274 individuals who received the treatment, 214 met inclusion/criteria, and 103 agreed to participate. The survey focused mainly on collecting information regarding flight activity before and after treatment. The primary outcome measures were: (1) number of flights per month (FpM); (2) number of flight hours per month (FHpM). For each participant, these outcomes were computed for the post-treatment period (≥6 months after FoF-VRET) and the corresponding pre-treatment period. FpM (mean±SD) increased from .05±.07 to .16±.07 flights (p<.0001). FHpM rose from .22±.41 to .80±.86 hours per month (p<.0001). These results are indicative of FoF-VRET treatment efficacy. Future studies should evaluate long-term maintenance of the treatment effect and thus identify the optimal frequency for delivery of periodic booster treatments.

Keywords—fear of flying; virtual reality; efficacy; retrospective follow-up study

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