

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

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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 \pm SD) increased from $.05\pm.07$ to $.16\pm.07$ flights ($p<.0001$). FHpM rose from $.22\pm.41$ to $.80\pm.86$ 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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