

Amelia by XRHealth Clinical Case

Distance Treatment: Fear of Flying



**Health care professional with expertise in VR:
Joan Miquel Gelabert**

Patient

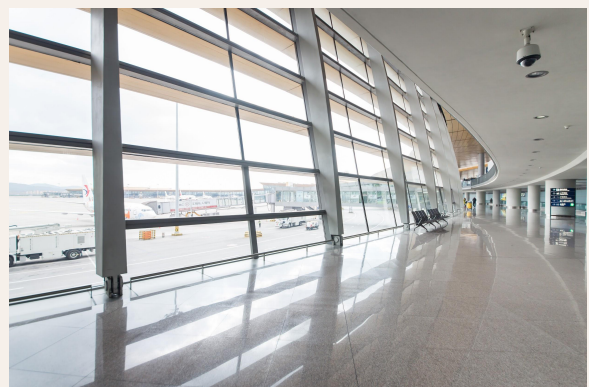
Marta.

Her partner is from Menorca, so she usually travels a lot there by plane.

Reference diagnosis

The phobia of flying appeared after the Twin Towers terrorist attack. Previously she had no problems when travelling by plane.

She hasn't stopped travelling, although she does it with serious difficulties. The day before catching a plane she feels nervous all day long and can't stop thinking about the journey from her house to the airport...



Objectives

Objectives to be achieved.

Being able to carry out an effective therapy without a constant presence of the healthcare professional while still having support and guidance during the therapy.

Understand how the devices used in therapy work, in this case the VR goggles, and how the therapy will be performed.

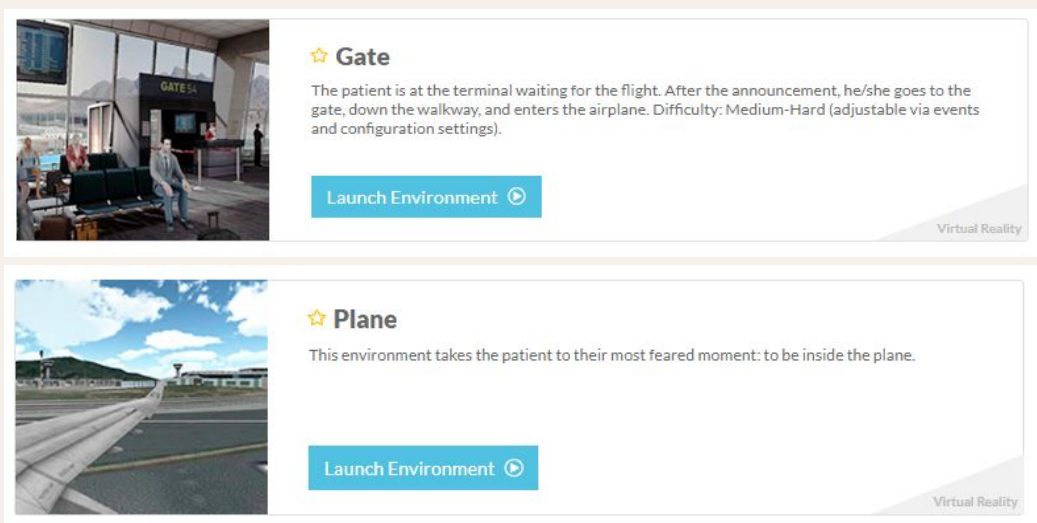
Methodology

Elaboration of a first interview where the state of the patient will be assessed, a hierarchy of action will be carried out based on the results obtained in the test of fear of flying, and then the sessions are planned.

The patient will only be able to visualize the environments programmed by the healthcare professional. The exercises will be repeated until the patient reaches an habituation mark, once achieved, a new exercise will be performed.

Once the session is over, the patient receives feedback from the healthcare professional.

After the session, the healthcare professional will receive a questionnaire answered by the patient and will evaluate how the next session should proceed.



The image shows two screenshots of a VR environment interface. The top screenshot is titled "Gate" and shows a virtual airport terminal with people waiting. The bottom screenshot is titled "Plane" and shows a view from inside an airplane looking out the window at a runway.

Gate

The patient is at the terminal waiting for the flight. After the announcement, he/she goes to the gate, down the walkway, and enters the airplane. Difficulty: Medium-Hard (adjustable via events and configuration settings).

Launch Environment

Virtual Reality

Plane

This environment takes the patient to their most feared moment: to be inside the plane.

Launch Environment

Virtual Reality

Development

The 8 sessions (20–30 min) were established according to the exposure response.

First session: The functioning of the goggles is explained, and the fear of flying is analyzed at a rational level, focusing on those aspects that generate a more anxious response in the individual (the functioning of an airplane is explained, knowing the meteorological conditions, etc.).

Throughout the sessions the patient becomes accustomed to the situation, there was no evidence of panic present at any time. The patient refers to a lack of graphics but at the same time this lack of graphics is compensated by the large number of details of the scene that facilitated the immersion.

The contact with the healthcare professional is not null, although along the exposures they begin to distance.

The patient administers herself the homework (homeworks) configured in the form of an exhibition hierarchy. The patient starts with low discomfort level environments (e.g. landing), performs the exposure task at home and autonomously and, at the end, answers online questionnaire about discomfort level. Depending on the response, the exposure task is rescheduled or the next in the hierarchy is set. In this way, the therapy progresses until the conditioned discomfort is extinguished, with all the situations related to travelling by plane.

Therapeutic contact is minimal; visualisation of the patient's post-session response and resolution of doubts regarding the programming of the sessions, and only by email.

Results

At the end of therapy was observed:

A total habituation to the stimuli and anxious situations is reached in approximately one month. In addition, an adaptive relearning is achieved, she gets to enjoy flying.

It's possible to observe a very drastic change regarding taking flights. Halfway through the session she had to take a flight to Menorca responding very anxious, at the end of the therapy she is able to take flights to Menorca and London without any complaints, even when the flight presented complications due to bad weather.

The patient states that being able to do therapy at a distance and receiving almost immediate feedback after the sessions helped her a lot to adhere to the treatment.

It should be noted that during the first interview, not only does the healthcare professional receive information from the patient, but the patient must also receive information about the type of therapy that will be performed.



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