

# Amelia by XRHealth Clinical Case

## Virtual Reality in a Case of Fear of Flying



Health care professional with expertise in VR:  
Soledad Cabrera

# Patient

## Female, 54 years old

The patient refers to a sudden change in her life, **for the last 7 years** she has not travelled by plane due to physical discomfort when boarding an airplane.

Prior to these 7 years the patient traveled and boarded planes frequently without having any discomfort.

Before coming to therapy she took an Iberia course to try to improve her situation, although she says that her anxiety levels dropped, she couldn't overcome her fear and still refused to get on an airplane, "**I didn't believe what they were telling me**". At the end of the course she still couldn't get on the plane.

She comes to consult because she wants to be able to see her eldest daughter, who is currently studying in Poland.

## Reference diagnosis

Fear of **turbulence and sensation of speed** especially at takeoff and landing. During the flight also mentions anxiety but in a lower intensity

# Objectives

## Objectives to be achieved

Reduce anxiety levels when boarding an airplane.

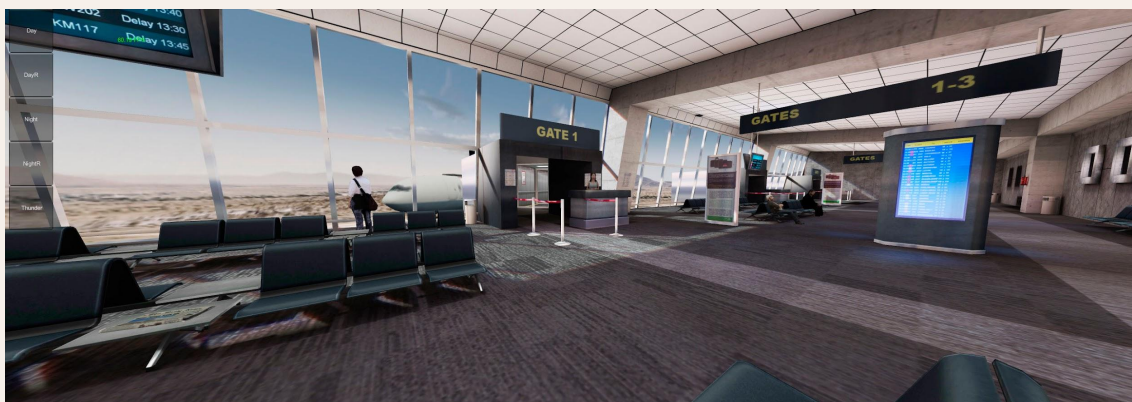
Be able to catch a plane to see her daughter.

## Methodology

Use of VR to **expose** the patient to the speed sensation produced in airplanes when taking off and landing.

**Systematic desensitisation** was carried out using the exposures to reduce anxiety levels.

A strategy of pure **acceptance** is followed, it intends to try to make the patient acquire a passive role in the situation that generates her anxiety.



# Development

## The therapy was structured as follows (started in November):

1. The airplane scene is changed to the elevator one because the patient states she doesn't believe the situation in the airplane scene. But states that the elevator scene is more realistic for her because it generates the same physical discomfort as in a real airplane.
2. Once the anxiety in the elevator scene has been overcome, we move on to the car scene. In this scenario she reports a great feeling of anxiety at some points she even took the goggles off.
3. After the desensitization in the elevator and car scenes, the plane scenario is presented again. This time she states a great feeling of anxiety, especially in those cases in which she looks at elements that accentuate the sensation of speed.
4. The patient is trained in the driving scenario so that she does not focus her attention on the elements that accentuate the sensation of speed and that she focuses her attention on general elements.
5. In **February** she travels by plane to Menorca and declares not to have suffered anxiety during landing and take-off (Anxiety = 0), but she refers a little anxiety during the flight (Anxiety = 1), so we see a clear improvement compared with to the beginning of therapy.



# Results

- It's possible to observe a great evolution in both, the improvement of the symptomatology (she gets on an airplane) and in the immersion in virtual reality (she goes from not believing anything she was seeing to feeling it perfectly). The use of other scenarios also means that the patient cannot prepare for the exposure she will experience with VR.
- During therapy she suffers a small relapse when her daughter does not notify her that she has arrived when she catches a plane, but she manages to overcome it without many problems.
- Currently, the patient states that she is able to overcome her fear of flying.



## ★ Highway

A route that consists of a two-lane highway that eventually changes to three lanes, with bridges, tunnels, passing cars, and more exposure options. 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



**amelia**  
by XRHealth