

# Amelia by XRHealth Clinical Case

## Amaxophobia



Health care professional with expertise in VR:  
María Montero Martínez

# Patient

## **41-year-old female**

She failed the practical driving test six times due to anxiety.

She quit her job which was 50km away, as a result of having suffered an anxiety attack and being stuck in the middle of the highway.

She will only travel on the highway when she is the passenger, and the driver is her partner, and still suffers from cold sweats and discomfort.

There's not a clear cause for this fear of driving, she simply states that she has never felt comfortable driving.

Before coming to therapy, she undergoes cognitive-behavioral treatment and live exposure without having done relaxation work. As a consequence of this, during the exposure the patient is blocked and loses all hope of improvement.

## **Reference diagnosis**

High levels of anxiety when she has to drive or is a passenger on a highway. She had been off the road for a long period of time.

She has tingling sensations during anxiety attacks as well as strong hand tremors, sweating and a lot of muscular tension that have caused contractures in the neck, trapezius and shoulders.

# Objectives

## Objectives to be achieved.

Reduce stress levels when driving.

Reduce anxious response when she is riding as a passenger.

## Methodology

Creation of a **hierarchy of anxious situations** in order to work progressively with SD (systematic desensitisation)

- Increase of speed, to surpass the 45 km/h in the city. Allowing the driver of the vehicle to exceed 80 km/h on the road.
- Changes in weather conditions (sun-rain) and timetables (day-night).

Realization of **relaxation and mindfulness** techniques to control the anxiogenic state.

Realization of **live exposure**. → At the end of the treatment, book a practical class in a driving school to put the patient in these anxiolytic situations once they have been worked on in therapy to ensure their safety.



### ★ Jacobson Relaxation

A full Jacobson exercise for focusing muscle groups in sequence. Duration: 9 minutes. Level: beginner-intermediate (adjustable via configuration settings).

Launch Environment ▶

Virtual Reality

# Development

## Sessions every week of approximately 1 hour.

- First session; relaxation techniques with VR (diaphragmatic breathing) are taught.
- Second session; the patient reports intense dizziness in the city environment when the car takes a bend. The option is to leave that environment and work directly on the motorway.
- Third session; the event of curves on the motorway is introduced, as well as incorporating Jacobson relaxation techniques.
- Fourth and fifth session; sequences of environments are carried out to test the situations that produce anxiety:

### **"Highway - bridge with diaphragmatic breathing - highway-tunnel"**

- Sixth session; the weather conditions are changed and overtaking takes place (sun-rain). Application of breathing or Jacobson when anxiety increases (remaining within the environment).
- Seventh session; it's possible to observe an increase in the sense of security of the patient as well as a decrease in the sensation of anxiety, despite the increase in speed compared to the initial situations.
- Eighth session; we can see a great change with regards to previous sessions; anxiety controlled during a skid at high speed.



# Results

After therapy, the patient reports an improvement in the level of anxiety when she is the passenger with her partner on intercity routes or highway journeys.

**"I don't remember driving to a friend's house for dinner, I guess that's a good sign".**

An increase in the level of confidence in her partner's driving can also be observed. She began to enjoy the journey and no longer noticed the elements of the road and the speedometer as much.

The patient refers to the **great investment and help** presented by the use of VR as a complement to the sessions.

**"I could never have imagined that I would know how to react to this situation"** (response to a "skidding" situation in one of the sessions).

It's possible to observe a considerable improvement doing in vivo driving exposure, but it's still needed more work on specific situations such as descending bridges.

At the end of the sessions, the patient is motivated to do in vivo exposure in a driving school.



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