Amelia by XRHealth Clinical Case

PTSD
by traffic accident

Health care professional with expertise in VR:
Alejandro Alberca

Patient

Adela, 18 years old.

Student and lives with her parents.

She's not a diver.

Background; Suffered a serious accident with her sister (driver) on their way to their rural residence.

Reference diagnosis

Derived from her insurance company, diagnosed with Amaxophobia.

After three months and 20-30 sessions of therapy she hasn't accomplished any improvement.

During consultation the presence of PTSD symptoms are evidence. For example: Mentions constant nightmares even when she closes her eyes.

After the evaluation she's diagnosed with PTSD and not Amaxophobia.

> *"I suffer from constant nightmares. I'm not able to get in the car without reliving what happened"- Adela*

Objectives

Objectives to be achieved.

Reduce anxiety levels and fears of the patient.

Methodology

- ➤ Evaluation: Observe if the symptomatology is real, personality traits and levels of emotional expression and comprehension.
  - ○ It's possible to observe high levels of <u>anxiety</u>, <u>introversion</u> and a <u>deficit in emotion management</u>.
  - ○ There's no evidence of strategies to control the anxiety.
- ➤ During the **exposures** there is **interaction** with the patient in order to calm her down.
- ➤ Apart from VR treatment **cognitive restructuring is applied**.
- ➤ **Homework** is sent between sessions for her to expose her work and to work on her fears.

☆ **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

10 Sessions(From session 6 consolidation sessions are applied).

➢ **First session.** Exposure on city driving

It's possible to observe a relative calm answer with some anxiety peaks which decrease drastically when relaxing and talking to the patient.

➢ **Second session.** Exposure on road driving.

Points of greater reactivity and sensitivity are observed although the relaxation processes give greater response.

Cognitive restructuring is constantly applied during sessions and homework is sent.

Development

➢ **Third session.** Exposure on road driving with <u>breakdown</u>.

The exposure with breakdown is done <u>without telling the patient</u> (remembers the stress situation she lived). Responds in a reactive way. After she is exposed many times, responds without any inconvenience.

Nightmares disappear completely.

➢ **Between third and fourth session.**

In vivo exposures began as a companion → She is able to arrive to her town with a controlled anxiety thanks to the given instructions.

➢ **Session 6.** No motives are referred to continue with treatment.

Her mood improves. Her relationship with family and friends improve is more open.

➢ **Session 7.** Recovers a big part of her life.

Starts to get in the car without any problem and frequently.

➢ Consolidation sessions are maintained until session 10.

Goes through the place of the accident again and is able to control the anxiety levels.

Results

It's possible to observe during the whole therapy how the patient had a fast and positive evolution. Nowadays she has a driving licences and it's able to drive frequently and to go through the zone the accident occurred.

About Amelia by XRHealth:

Using the Virtual reality tool has helped to perform exposures that wouldn't be possible to perform in an other way. Not only the exposure environments had been useful but the relaxation ones helped on the positive evolution of the patient.- Alejandro.

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