

Amelia by XRHealth Clinical Case

Fear of Animals



Health care professional with expertise in VR:
Luciana Moretti

Patient

Woman, 58 years old, lives with her couple and kids.

Has always presented fear and affliction in the presence of animals. Mainly observing the facility for them to approach.

Has a perception that people who have dogs have a permissive attitude, they allowed dogs to invade her space and enter to shops, even restaurants without consideration towards people who fear them.

Reference diagnosis

When she comes to consult, the presence of dogs generates her responses of crying and flight, she changes sidewalks when she sees a dog.

Avoids going out of her house, go for a walk or even go to restaurants if she perceives the presence of a dog, even if it's controlled by its owner.

"All animals produce tension, but some can be frightened, such as cats or pigeons. With dogs it is different; now they're everywhere, and everyone has them" patient

Objectives

Objectives to be achieved.

The use of VR allows to create the problematic situation in the therapy room, interact with the patient in real time, based on her responses to the anxious stimuli and not from her speech.

Methodology with VR.

- **14 sessions;**

Mindfulness; Body scanner, meditative walk and spring.

Relaxation; Under the sea with bubbles, exposition with fish and Jacobson relaxation technique.

Acrophobia; Cristal elevator. → To prepare the patient to the future exposition. This scene generates sensations on every individual.

Fear of animals; Dogs.

! All results obtained are discussed with the patient to get to know what has occurred during the sessions.

- **Sessions to treat her fear of dogs.**



Development

First phase. Mindfulness with focalized attention.

- Objective; Get to know where the patient is directing her attention during the exposure. → Help to prepare a future exposure in order to make it more natural.
 - Scenarios; Body scanner and meditative walk.
 - Methodology; Mindfulness guided while standing. Simulating the most common position she will find herself when encountering a dog.
 - Electrodermal Response Sensor Results;
1. At the beginning of therapy it was possible to observe how the patient when trying to calm down starts shaking and has the necessity of moving. These sensations disappeared when learning the relaxation techniques.



2. With the learning achieved it's possible to observe how the motor response decrease, It's possible to observe less peaks and a descendent curve.

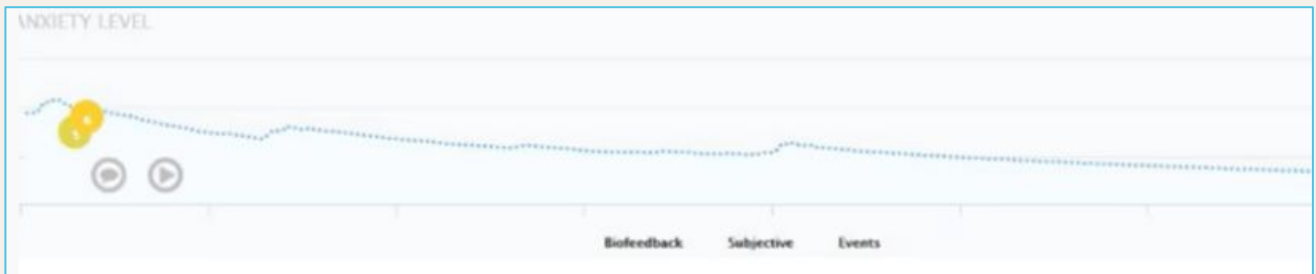


3. The patient is more aware of her presence and thoughts when listening.

Development

Second phase. Mindfulness in open field.

- Objective; Become aware of her thoughts and what to do with them. De-identification and contemplative observation.
- **1 Scenario**; Under the sea with bubbles.
- Methodology; Try to put the thoughts inside the bubbles.
- Electrodermal Response Sensor; Serene curve, descendent and an open attention.



- **2 Scenario**; Under the sea with animals (fishes, whales, sharks).
- Methodology; Exposure to sea animals before doing an exposure with dogs.
- Electrodermal Response Sensor; Very irregular curve with a lot of response and a hyper-focalization in the details of the animals.



Development

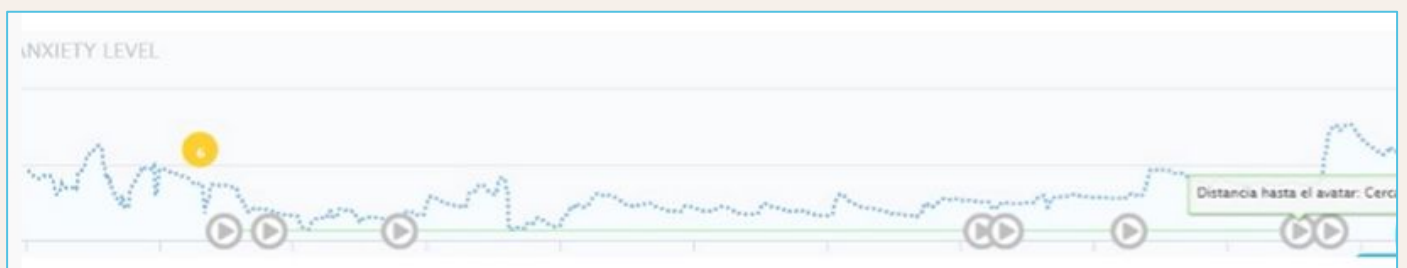
Third phase. Exercises out of therapy and exposure to virtual dogs with different parameters.

➤ **Exercises on the street/house;**

- Try not to cross the street when she sees a dog and regulate herself with mindfulness.
- Allow dogs to be there without having to interact with them.

➤ **In therapy:**

- Objective; Generalization on everyday situations.
- Scenario; Fear of dogs.
- Methodology; Expose the patient to the different parameters of proximity and movements of the dog.
- Electrodermal Response Sensor; Increased on anxious movements when the dog gets near her.



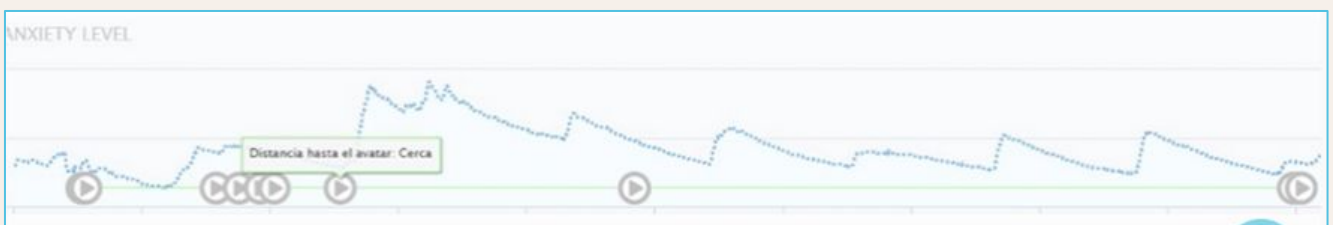
Development

Perceptive change.

! During one of the exposures the patient realize that her attention is focalized on the owner of the dog (avatar). She perceives them as untruthful, instead of being frightened by the dog.

Background: Unpleasant interactions with a person that used his dog to make her afraid and laugh at her. Owners that don't control their dogs to respect her space and allow them swing on people.

- Scenario; Relaxation combined with exposure to dogs.
- Methodology; Introduce the anxious stimuli (dog) in the different circumstances.
- Electrodermal Response Sensor; Possible to observe how she is able to activate and relax by herself.



- Assertiveness is worked and the capacity to regulate her reactions towards individuals who own dogs and that are perceived as aggressive.
- When the intervention is over she is capable to interact with dogs but she continues to work in her source of fear in order to control it.

Results

At the end of therapy it was possible to observe:

The use of VR makes it possible to put the patient in the **problematic situation** in a real time without a real risk, thanks to the **multimodal immersion**, to the **feeling of presence** and to the **displacement of context** (facilitates the awareness in what before was a narrative speech of the patient).

The VR also helped the patient to become aware of the factors that really make her anxious. This helped with the in vivo exposures with Canela (real dog), she ended up feeling close to her.



Canela, exposure dog



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