



Virtual reality experiences as tools to support mental health

27/04/2022 – Mental Health Reform
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A blurred background image of a person wearing a virtual reality headset and holding a controller, sitting in a chair. The person is wearing an orange and white striped shirt. The background is a wall with a grid of circular holes.

Background on
immersive technology

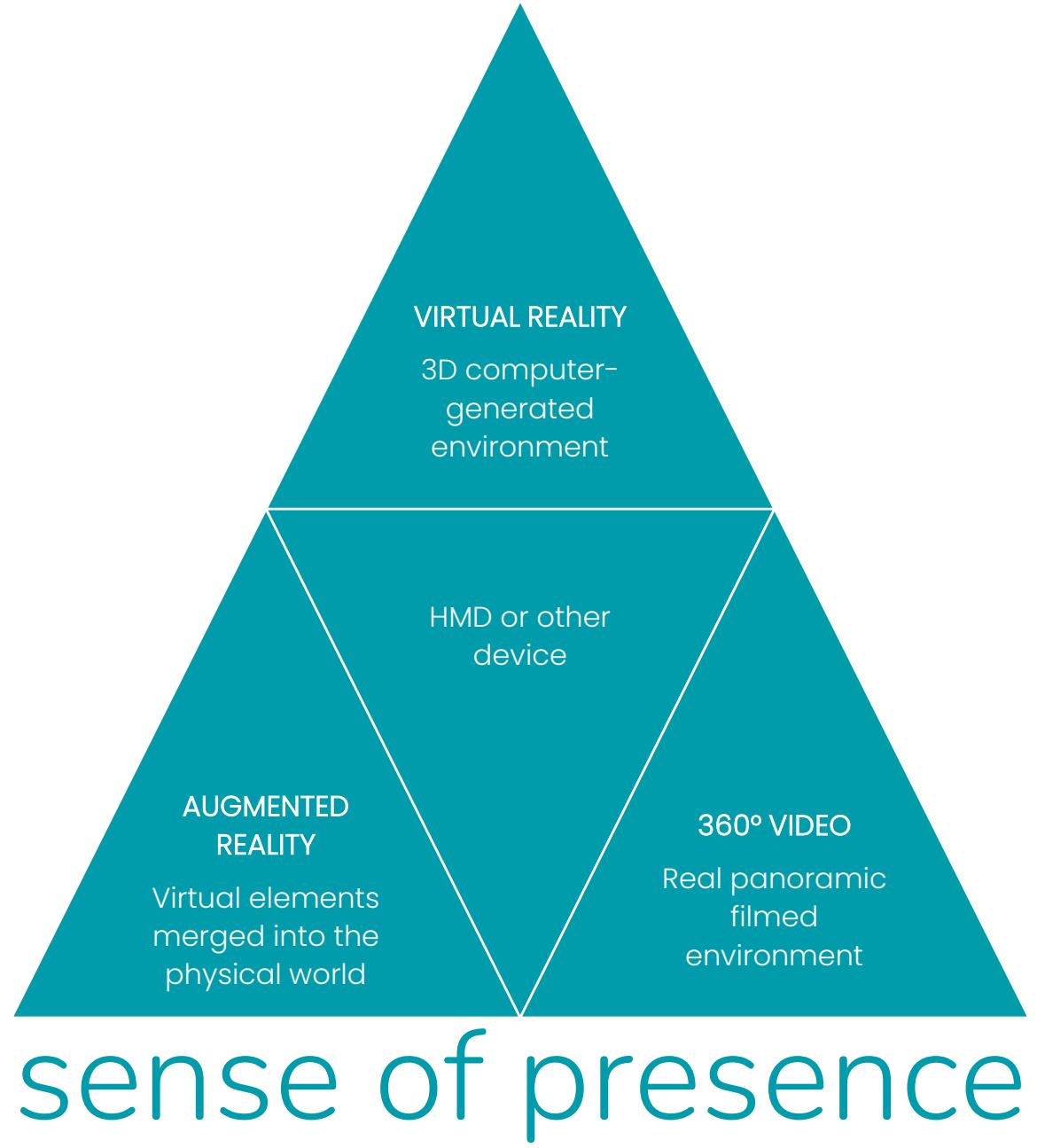
Intervention techniques

Existing solutions

Future perspectives

Background

*what it is &
how it all
started*



1962 - Sensorama

- Immersive image
- Stereo sound
- Aromas
- Wind
- Vibrations



2020 –
Meta Quest 2



Current use &
evidence-
base

*what & for
whom?*

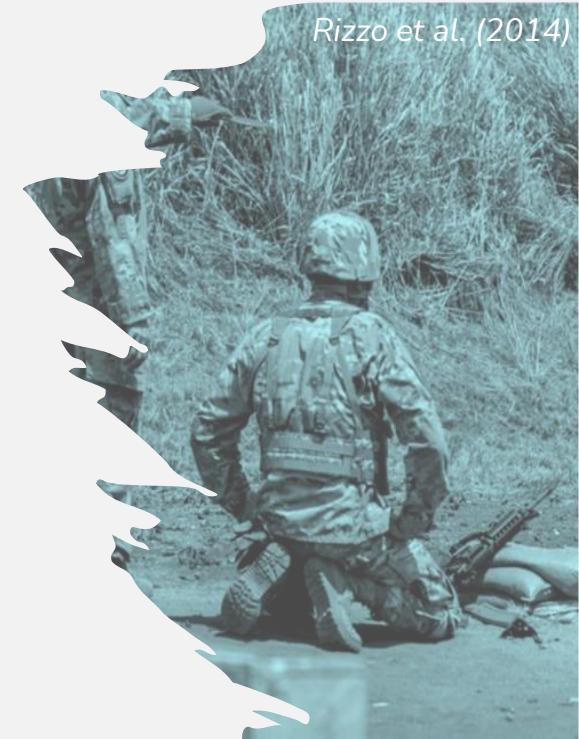
Long-standing research on 2 intervention techniques

Exposure therapy
specific phobia



Czerniak et al. (2016)

Prolonged exposure
PTSD



Rizzo et al. (2014)

Long-standing research on
2 intervention techniques

But also

Distraction
Hoffman et al. (2019)

Relaxation
Veling et al. (2019)

Psychoeducation
Migoya-Borja et al. (2020)

Behavioral activation
Paul et al. (2020)

Cognition challenging
Serino et al. (2016)

Pain reduction

Mood & anxiety disorders

Depressive symptoms

MDD

Anorexia Nervosa

Existing
solutions

what is
currently out
there?

XR platforms

- Several tools or modules.
- Complete solutions with proprietary hardware.
- Costs may vary (substantially).
- Support frequently included as well.



oxfordvr

Immersive technology for mental health

VIR TU C
CUTTING EDGE VR & SIMULATION SOLUTIONS

The logo for Psylaris consists of a blue asterisk-like shape made of four curved segments, followed by the word 'Psylaris' in a dark grey, sans-serif font.

Psylaris

vrendle

The logo for C2 CARE features the letters 'C2' in a large, green, sans-serif font inside a square, with the word 'CARE' in a smaller, green, sans-serif font below it.

**C2
CARE**

(YouTube) 360°

- Broad range of freely available experiences.
- Sometimes difficult to find suitable experiences, e.g. fear of heights.
- Easy to use on most HMDs, or even with a smartphone and cheap headset.
- www.e-mentalhealth.be/vr



(YouTube) 360°



HOME VIDEOS PLAYLISTS COMMUNITY CHANNELS ABOUT

Popular uploads ► PLAY ALL

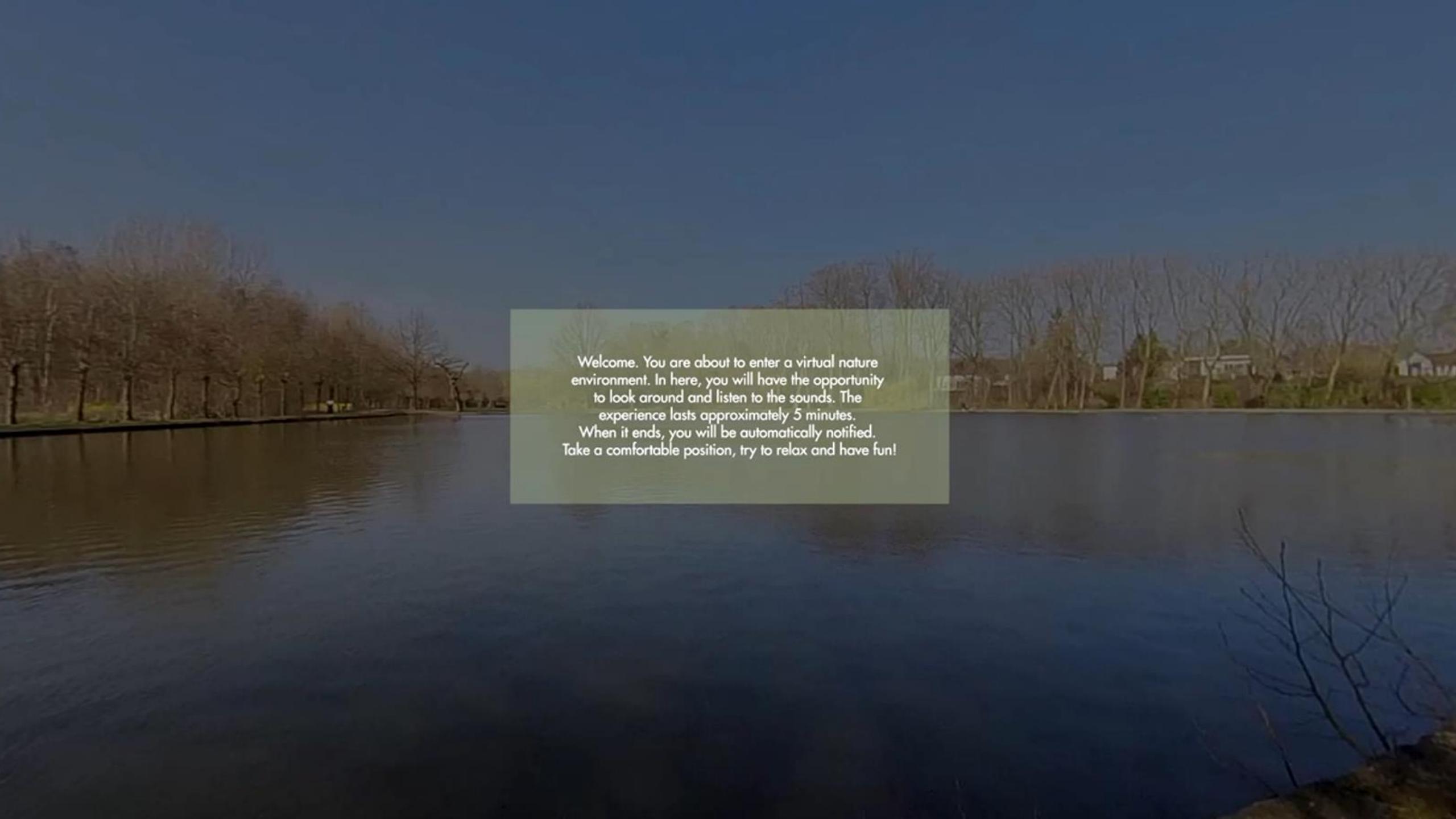
VR 360° - Claustrophobia - Old elevator moving doors - ...
1:37 161K views • 3 years ago 360° VR 360° – Height – Glass elevator
2:57 158K views • 4 years ago 360° VR 360° - Claustrophobia - Glass elevator - With people...
1:09 114K views • 3 years ago 360° VR 360° - Claustrophobia - Old elevator moving doors - ...
1:23 60K views • 3 years ago 360° VR 360° - Claustrophobia - Elevator - With People - lvl2
1:03 56K views • 3 years ago 360° VR 360° - Claustrophobia - Elevator - lvl1
1:14 53K views • 3 years ago 360° >

Multiple playlists

VR 360° – Nature
e-mental health
[VIEW FULL PLAYLIST](#) VR 360° – Height
e-mental health
[VIEW FULL PLAYLIST](#) VR 360° - Claustrophobia
e-mental health
[VIEW FULL PLAYLIST](#) VR 360° – Buiten Binnen Brengen
e-mental health
[VIEW FULL PLAYLIST](#)

(YouTube) 360°



The background of the image is a virtual reality scene of a calm lake at sunset. The sky is a warm orange and yellow, reflecting off the water. In the distance, there's a bridge and some bare trees. A large, semi-transparent white box is centered over the water, containing the following text:

Welcome. You are about to enter a virtual nature environment. In here, you will have the opportunity to look around and listen to the sounds. The experience lasts approximately 5 minutes. When it ends, you will be automatically notified. Take a comfortable position, try to relax and have fun!

ZeroPhobia

Research

JAMA Psychiatry | Original Investigation

Effectiveness of Self-guided App-Based Virtual Reality Cognitive Behavior Therapy for Acrophobia: A Randomized Clinical Trial

Tara Donker, PhD; Ilja Cornelisz, PhD; Chris van Klaveren, PhD; Annemiek van Straten, PhD; Per Carlbring, PhD; Pim Cuijpers, PhD; Jean-Louis van Gelder, PhD





1



Lamp



Speakers



Clouds



Spot



Felix



Storm



Letters



Action!



Press
P
 Exit VR
environment



Press
P
 Exit VR
environment

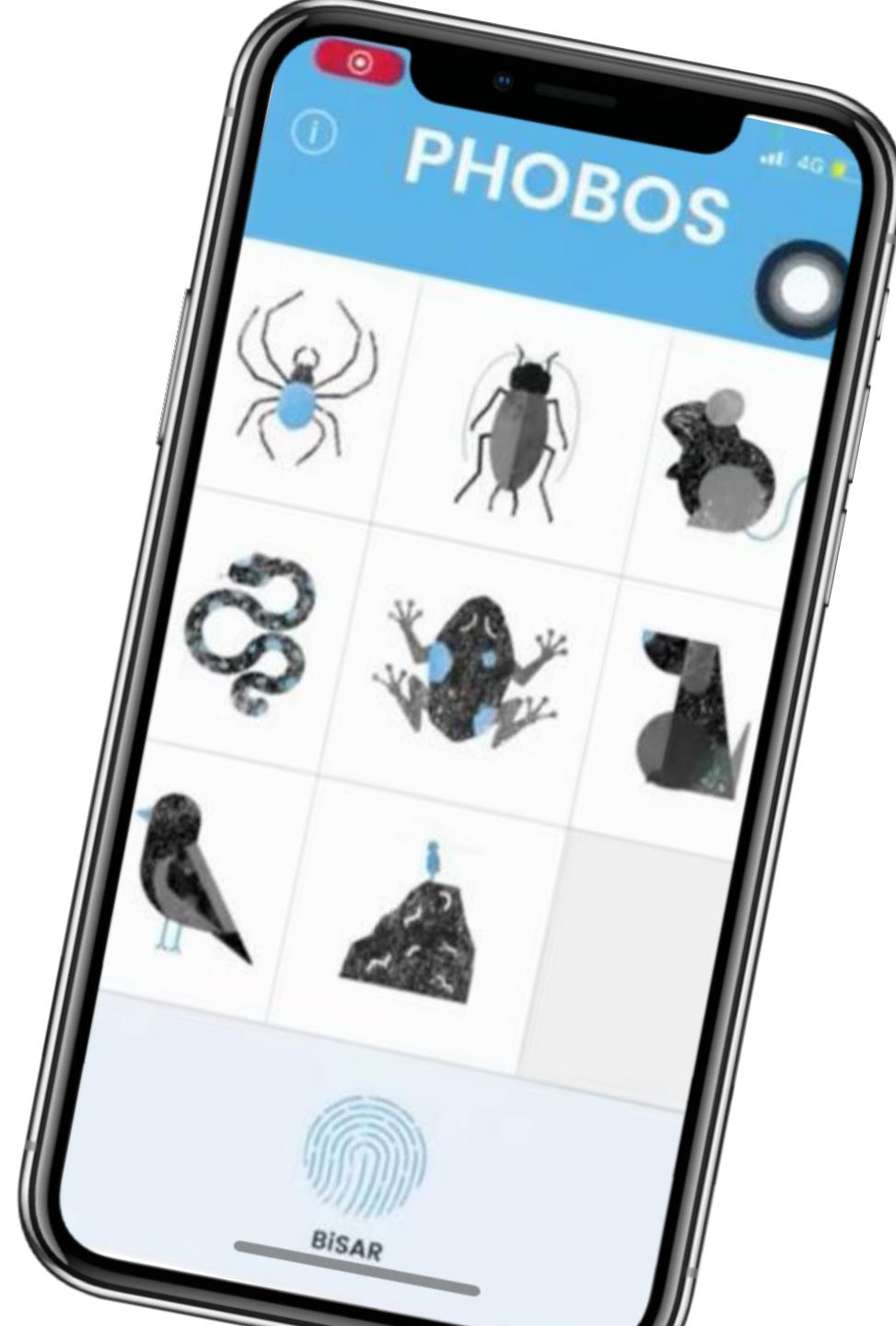


Press
P
 Exit VR
environment

Phobos AR

- AR for animal phobia
- Able to elicit anxiety in non-clinical populations

De Witte et al. (2020)



Phobys

- AR for spider phobia
- Embedded within a broader self-help intervention
- Proven effective

Zimmer et al. (2021)





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