VR in Health

Therapy and Personal Development

Štefan Hnát
2019
Cognitive Science
University Comenius, Slovakia
Fundamentals and principles of VR

- Immersive experience (high engagement)
- Virtual / Realistic / Real environments
- Interactivity / Responsiveness
Research
Meta-review article from 2019

Neuroscience of Virtual Reality: From Virtual Exposure to Embodied Medicine

Giuseppe Riva, PhD, Brenda K. Wiederhold, PhD and Fabrizia Mantovani, PhD

Virtual Reality in Behavioral Health

VR as Simulative Technology

VR as Embodied Technology

VR as Cognitive Technology

The Effectiveness of VR as a Clinical Tool
Possible applications

**Phobias treatment** - Claustrophobia, Agoraphobia, Fear of heights

**Meditation techniques** - Mindfulness, Focus meditation, Relaxation techniques, Breathing techniques

**Anxiety treatment** - Social anxiety, Public spaces anxiety, Public speaking and Interview problems, PTSD, Eating and weight disorders

**Perspective shift, perception adjustment** - Second person view, Self reflection, awareness exercises, belief system adjustment
Applicable therapeutic methods

- Exposure therapy
- Cognitive-Behavioral therapy
- Art therapy
- Transactional Analysis
- Solution Focused Brief Therapy
- Rational Emotive Therapy
- EMDR
- Mindfulness-based Cognitive Therapy
- Hypnotherapy
- Gestalt therapy
- Dream analysis
- Biofeedback
- Stress Inoculation Training
- Psychoanalysis, Psychodynamic therapy
Companies out there

https://www.vrtherapies.co.uk/  
https://www.neurorehabvr.com/  
https://www.xr.health/clinical-evidence/  
https://verapytherapy.com/  
https://www.limbix.com/  
https://psious.com/  
http://beanotherlab.org/  
https://ovrhealth.com/
Current generally available technologies

Oculus Quest
Vive Cosmos
Valve Index
Microsoft Hololens
Phone VR headsets
Advanced technologies

Hand tracking

Synthetic skin

Omni-directional Treadmill / Static locomotion sensors

Digital Scent Technologies
Sources

Literature


Digital media

https://l3apq3bncl82o596k2d1ydn1-wpengine.netdna-ssl.com/wp-content/uploads/2019/10/1108x622-810x455.jpg

https://cdn.mos.cms.futurecdn.net/DDfUFvt3iEwiQmECo9j2Wi-650-80.jpg


https://cdn-images-1.medium.com/max/1200/1*076wF9VD3XxRABz12uNfCA.jpeg

Questions are welcome

Thank you