

VRDC
FALL 2017

Virtual Reality for Treatment of Phobias

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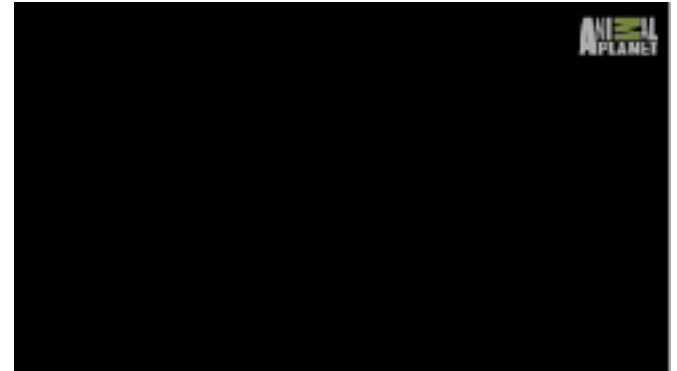
Goals

1. Defining Phobias
2. History of VRET
3. Discussion of Clinical Evidence
4. Advantages of VR
5. Technical and Design Current Projects
6. Future Directions and Discussion



Phobias

- Anxiety Disorders
 - Persistent (>6 mo), excessive or unreasonable
 - Specific phobias, social phobia, agoraphobia
 - Specific physiological response
- Current Gold-Standards in Treatment
 - CBT (Cognitive Behavioural Therapy)
 - Systematic desensitization



- Other Treatments
 - EDMR
 - Medication
 - PMR

BMJ Best Practice

History of VRET



Malbos 2013



Evidence for VRET

- Effective for fears of: small spaces, heights, flying, spiders (and other small animals), falling, dentists, social situations, public speaking, PTSD...
- Meta-analyses (x3): *As effective, or more effective*, than in-vivo
- There is a dose-response relationship
- Low dropout rates
- Elicits the same physiological response as in-vivo

Powers 2008, Morina 20, Opris 2012, Morina 2015, Kampmann 2016, Diemer 2014, Levy 2016

Advantages of VR over Traditional Rx



- Private
- Affordable
- Flexible
- Controllable
- Repeatable
- Very low risk
- Preferable for clients
- Low drop-out rates

Design Considerations

Basic Emotions



Combined Emotions



Design Considerations

- Environment
 - Staged
 - Varied conditions
- Therapist
 - Real? Virtual? None?
 - Assessment
 - Treatment target
- Representing the Player
 - Virtual hand, demographics



Design Considerations



- Engaging other senses:
 - Vibrotactile feedback
 - Scent Machine
- Monitoring
 - Physiology, eye tracking
 - Measures ie SUDS
- Graduated vs Flooding
- Benefits beyond phobia treatment

Current Projects

- RCTs (arachnophobia, dental phobia, flying phobia)
- Virtually Better
- Bravemind
- Sydney Phobia Clinic
- Beyond Care



- Virtual Reality Medical Center
- CleVR
- Presentation Simulator

Future Directions

- We need more research and understanding
- For that, we need more projects!
- Clinical/tech collaboration is key

References

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Image "Flight VR Demo" <https://play.google.com/store/apps/details?id=com.refugio3d.flightvrdemo>

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Thank you!



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