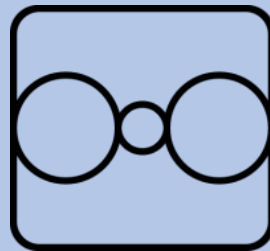


THE USE OF VIRTUAL REALITY IN INTERDISCIPLINARY MULTIMODAL PAIN TREATMENT: EXPERIENCES OF HEALTHCARE PROFESSIONALS AND PATIENTS

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Background

- Chronic pain is a frequently occurring and worldwide **health problem**
- One treatment option is an Interdisciplinary Multimodal Pain Treatment (**IMPT**) program
- **Virtual Reality (VR)** could be a way to **broaden the scope and application** of physical and psychosocial treatment modules
- Despite the known advantages of VR, it is **rarely implemented** in IMPT practice

Objective

This research aimed to explore **how, when, and for whom** VR can be used in a **meaningful way** during IMPT, either as an addition or substitution



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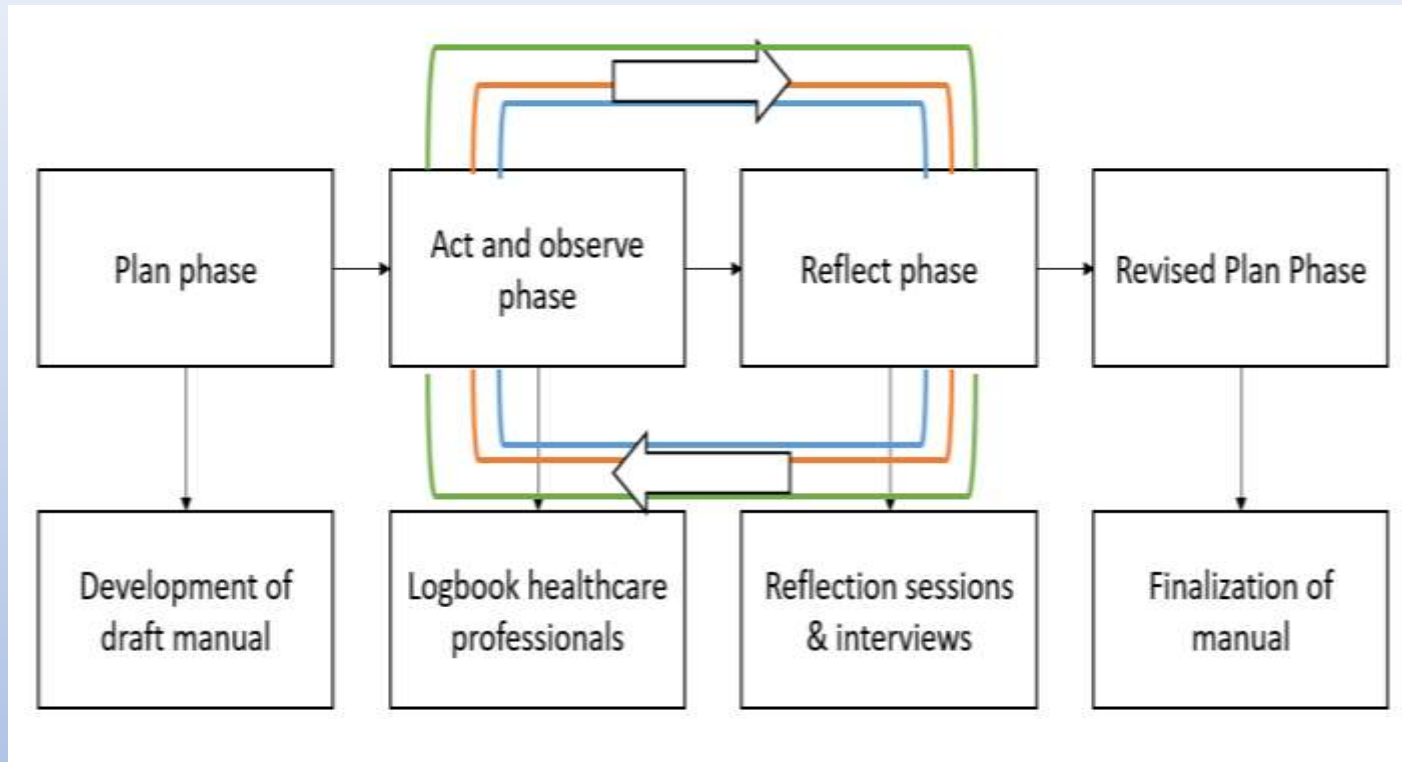
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Research questions

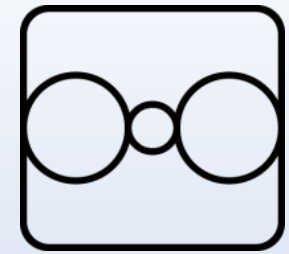
1. How do healthcare professionals and patients **use** VR as an addition or substitution in IMPT?
2. What are the **experiences** of healthcare professionals and patients with VR as an addition or substitution in IMPT?

Methods



Blue first round (n=7 healthcare professionals, n=7 patients), Red second round (n=7 healthcare professionals, n=6 patients), Green third round (n=7 healthcare professionals, n=8 patients).

Methods



Methods

UPPER BODY



Tennis

The balls are shot randomly to the player, and they change speed and position a little. Get points by hitting the ball over the net.

- Hands
- Shoulders
- Wrist
- Hand/eye coordination



Boxing

Hit the obstacles coming at you while matching the colors!

- Cognitive
- Hands
- Hand/eye coordination



Sorting

Put the items from the conveyor belt in the correct bins!

- Hands
- Shoulders
- Cognitive



Fireflies

Touch the fireflies before they fly away. Note: From difficulty level "Medium" and up, you have to touch them with a specific hand!

- Hands
- Shoulders

Results Use

Diagnostic tool

- Insight into the pain and fear avoidance beliefs
 - Insight into irrational cognitions
 - Insight in behavior (persistent/avoidant)

Results Use

Therapeutic tool

- Creating a balance between relaxation and competition
 - Graded activity
 - Exposure in vivo

Results

'I want them [the patients] to experience movements which they think can't perform, by working with the VR they experience they perform that movement.'

Health care professional

'I was really focusing on my emotions and could really experience them during the VR. If we would have used VR sooner in the trajectory, I think it would have missed its purpose since I didn't know how and what to feel during that time.'

Patient



Results Experience

Healthcare professionals

- Additional useful information

'I notice the enthusiasm of the patients when they use the VR, they are so enthusiastic they really want to talk about their experience'

Healthcare professional

Results Experience

Patients

- Physical activity is fun
- Distraction from pain and (perceived) disabilities
- Focusing on own experience

'I had to prevent the footballs from going into the goal and I was thinking about my back, but I didn't feel my back at all I was just playing!'

Patient



Recommandations

- Greater variety of games especially for the lower limbs
 - Activities resembling daily life
 - Relaxation exercise
- Direct feedback for patient and health care professionals

Conclusion

- VR could be a **useful addition but not substitution** to IMPT for both healthcare professionals and patients with chronic pain.
- VR was used as an **addition** to IMPT as a **diagnostic and therapeutic tool**.
- Both healthcare professionals and patients had a **positive experience** with the VR



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