

# A home-based feasibility study of Virtual Reality for Older Adults Living with Mild Cognitive Impairments

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## Introduction

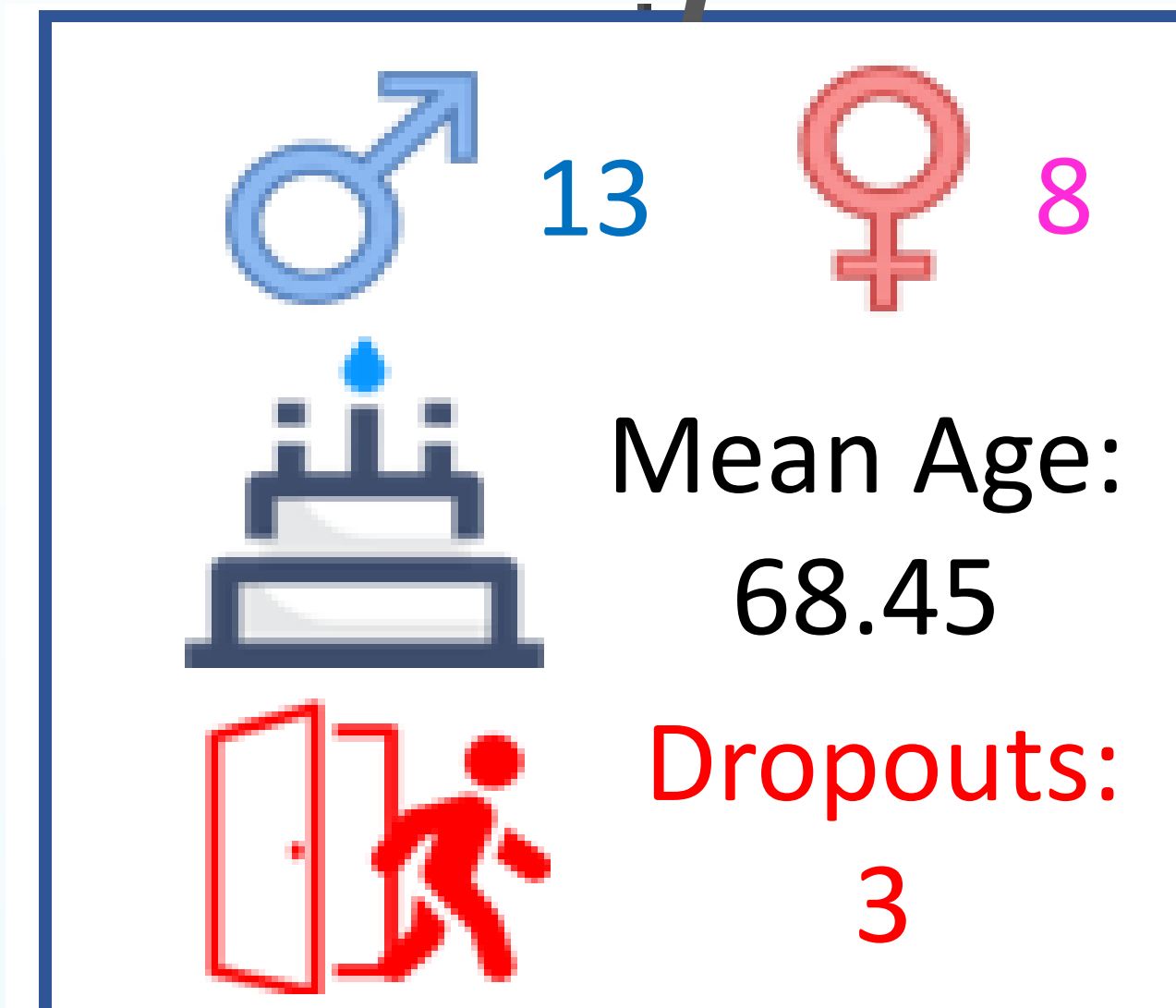
- Mild Cognitive Impairment refers to a condition that may cause minor difficulties in tasks requiring attention, memory, language processing, reasoning, planning or problem-solving, and/or visual depth perception [1].
- The individual may exacerbate behaviours that challenge, such as aggression, sadness, apathy, and loss of interest in oneself and others [2].
- Several studies demonstrated that Virtual Reality (VR) can be an alternative, non-pharmacological solution for reducing challenging behaviours [3].

## Research Questions

- Can VR be a usable and effective solution when used with older adults with MCI at home?
- Does VR have the potential to improve the emotional wellbeing and to regulate negative emotions of people with MCI at home?

## Methods

### Participants



### Equipment



### Experimental Design

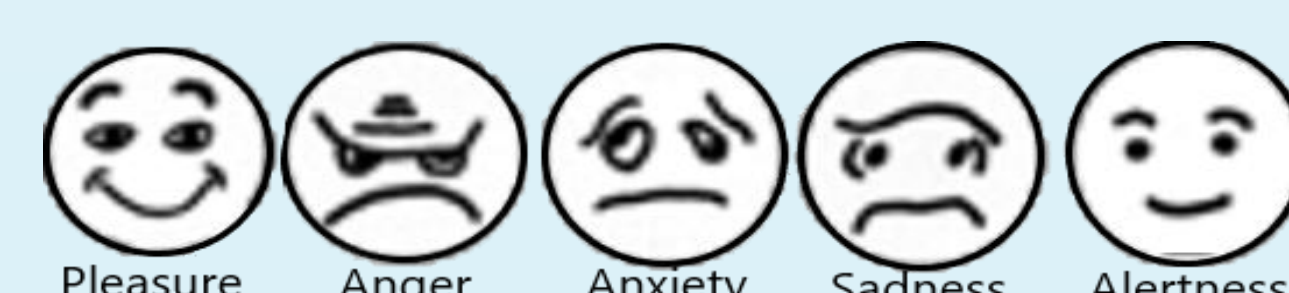


- A systematic patient-centric selection process was used to design the VR system and select the virtual environments [4].
- People with MCI could experience up to 3 virtual environments in their home space for up to 15 minutes.

### Instruments

Collected pre, during and post intervention

- Heart Rate
- Visual Analogue Scale [5]
- Observed Emotion Rating [6]



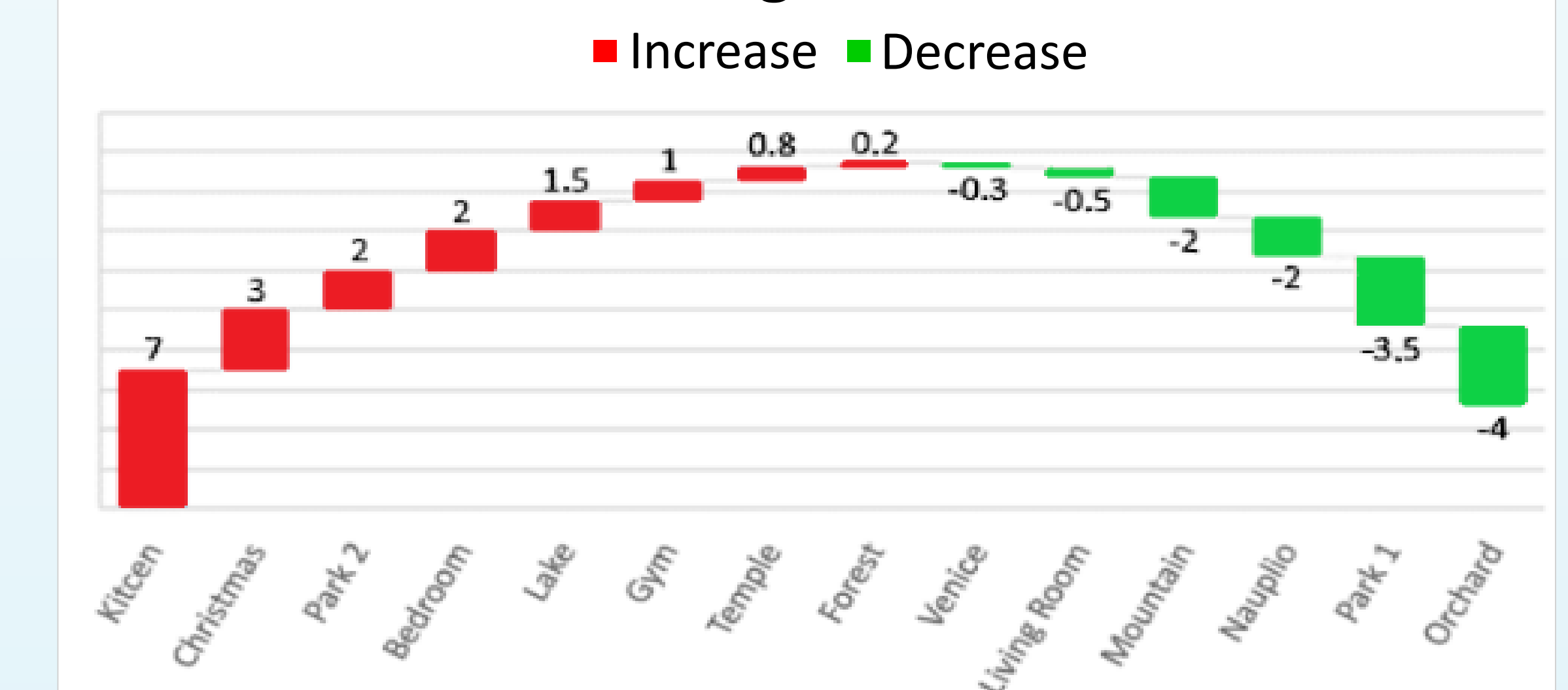
## Results

- The results showed a significant increase in pleasure and happiness and a decrease in anxiety and sadness. It appears that VR can enhance positive and regulate negative emotions for people with MCI who reside at home.
- VR exposure to nature decreased HR, whereas exposure to locked environments such as houses increased HR.

System evaluation based on emotions of participants



Heart Rate Change Per environment



## References

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