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

1. Can VR be a usable and effective solution when used with older adults with MCI at home?

2. Does VR have the potential to improve the emotional wellbeing and to regulate negative emotions of people with MCI at home?

Methods

Participants

- 13 males
- 8 females
- Mean Age: 68.45
- Dropouts: 3

Equipment

Virtual Reality Glasses and a 3D environment

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.

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