Exploring Virtual Reality Masks and Mindfulness skills training as a psychological intervention for military veterans on a NHS waiting list for psychological therapy: A Pilot Study

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Project Background:

Virtual Reality (VR) has a growing evidence base for efficacy in treating mental health difficulties such as generalised anxiety disorder (Gorini et al., 2010, Valmaggia et al., 2016). VR is also being researched as a means to deliver mindfulness skills training for 10 minutes per day over a set time scale (Chandrasiri et al., 2020, Navarro-Haro et al., 2017).

Patients who are on our psychological treatment waiting list at Veterans NHS Wales have mental health conditions which typically have anxiety as a core component.

We became interested in the use of VR and wanted to understand if loaning Virtual Reality Masks (VRM) would be a beneficial intervention for our patients to use in the comfort of their own home whilst waiting for psychological treatment.

Project Aims & Objectives:

Aims: To establish the effectiveness, feasibility and acceptability of using a VRM as a treatment waiting list intervention for managing anxiety.

Objective: Participant to loan a VR mask and use daily at home over 2 weeks. Participant to select and watch one of the 4 preloaded 10 minute duration VR mindfulness clips.

Project Approach:

Creation of VRM Mindfulness content: In collaboration with Digital Communities Wales and service user representatives, we created four immersive 360-degree 4k VR mindfulness clips. The 4 clips were areas of natural scenery in Wales with voice over of mindfulness skills training; Mindful Breathing, Mindful Seeing, Three Step Breathing Space and Body Scan.

Population: Military veterans with military service related mental health difficulties.

Participants recruitment: 15 participants on our waiting list consented to taking part in the pilot study. Participants were shown how to use Oculus Quest 2 VRM. The VR masks were used as prescribed for ten minutes per day over two weeks in the military veteran's own home. 2 participant's were excluded as the VRM was not used as prescribed.

Outcome measures and data collected: GAD-7 and ReQol-10 clinical measures were completed on the day of VRM loan (pre) and two weeks later on return of VRM (post). A qualitative participant feedback form was devised with questions based on a 7 point Likert scale and this was completed on return of the VRM.

Project Outcomes:
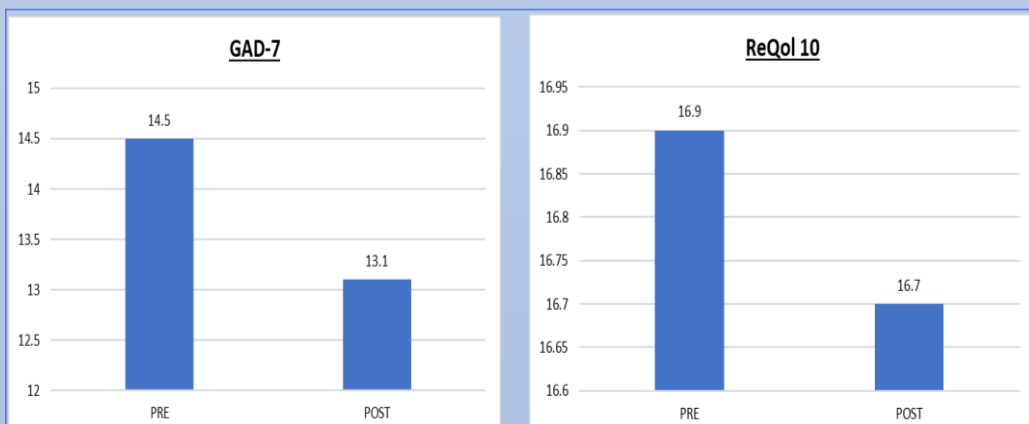
Post outcome measures indicated a slight decrease in the participants anxiety (GAD-7) and a slight increase in the quality of life (ReQol-10), however the results were not statistically significant.

Qualitative feedback was variable on the effectiveness of using VR and learning mindfulness skills as an intervention for anxiety.

VRM was generally found to be feasible and acceptable to use at home.

Project Impact:

- 62% of participants reported their anxiety reduced while using the VRM, and the same percentage reported reduced anxiety after use.

- 46% of participants reported learning new mindfulness skills during the pilot, with 67% reporting that they would continue to use these skills.

- 62% of participants suggested that 2 weeks was not long enough to learn mindfulness skills.

- 62% of participants felt that the intervention was easy to fit into their day.

- 54% of participants suggested that this had been a helpful intervention whilst waiting for treatment.

- 77% of participants would recommend VRM as an intervention to others waiting for psychological treatment.

- 69% of participants reported that overall, they benefitted from the experience.

Key Conclusions:
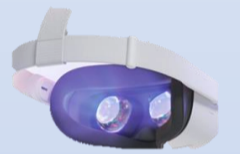
- The VRM pilot suggests this is generally an intervention that is acceptable and feasible that can be used for patients on our NHS psychological treatment waiting list.

- This is not an intervention that suits all on our psychological treatment waiting list however it is effective for some to learn Mindfulness skills and managing anxiety.

- Despite no statistically significant change in anxiety, pre and post quantitative measures indicated stability of mental health during VRM use.

Next Steps:

- Develop existing VRM protocols based on service user feedback.

- Developing the existing VR mindfulness content with service user participation.

- Further test the use of VRM on a wider cohort of clients accessing the service.

References:

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