

Summary of 3MDR Randomised Controlled Trial for Treatment Resistant Post-traumatic Stress Disorder in Military Veterans

Jon Bisson, Robert van Deursen, Ben Hannigan, Neil Kitchiner, Leigh Abbott, Kali Barawi, Kate Jones, Tim Pickles, John Skipper, Caroline Young

Executive summary

1.1. Post-traumatic stress disorder (PTSD) is a common and debilitating condition that is estimated to affect around 6% of British military veterans and up to 17% who have deployed in a combat role. Unfortunately, many veterans with PTSD remain symptomatic despite having received evidence-based interventions and there is an urgent need to develop more effective treatments.

1.2. Multi-modular motion-assisted memory desensitisation and reconsolidation (3MDR) is a new treatment for PTSD based on virtual reality exposure therapy and eye movement desensitization and reprocessing (EMDR), embedded in a novel context in which the patient walks on a treadmill whilst interacting with a series of self-selected images that are displayed on a large screen.

1.3. Preliminary results from research conducted by the originators of 3MDR in the Netherlands were promising. We, therefore, decided to explore the potential efficacy of 3MDR further by conducting a randomised controlled trial, with nested process evaluation to assess how it was experienced by participants and therapists and factors that influenced outcome.

1.4. Forty-two military veterans living in South Wales who continued to experience service-related PTSD following treatment with trauma-focused psychological therapy took part in the study. Participants completed a baseline assessment and were then randomised to receive 3MDR immediately or after a delay of 14 weeks with follow-up assessments occurring at 12 and 26 weeks post randomisation. Retention rates were 83% (35 participants) at 12 weeks and 86% (36 participants) at 26 weeks.

1.5. Eleven of the participating veterans and all the 3MDR therapists participated in a single qualitative interview, designed to provide greater understanding about 3MDR, the experience of receiving and of delivering 3MDR, and of being involved in the research trial. Participating veterans were purposively selected to learn from as wide a range of individuals as possible, with different characteristics and experiences.

1.6. PTSD symptom severity was statistically and clinically significantly better for the immediate treatment group than the delayed treatment group at the 12-week follow-up point, with a 19% greater reduction in PTSD symptoms. The delayed treatment group also responded well to 3MDR and the immediate treatment group maintained their improvement at 26-week follow-up. It is important to note, however, that not all participants improved following 3MDR and some reported increased symptoms. The likely effect size of 3MDR was found to be 0.63, representing a moderate treatment effect despite it being tested in veterans with treatment-resistant PTSD.

1.7. 3MDR was found to be acceptable to most, but not all, participants and to all the therapists delivering the intervention, albeit with recommendations on what could be done to enhance its effect. Key findings in this regard included the appropriate assessment and selection of potential candidates for 3MDR, enhanced preparation in advance of 3MDR, the number of treatment sessions available, support between sessions and greater flexibility with respect to content of later 3MDR sessions.

1.8. This study has shown 3MDR to have emerging evidence of effectiveness for treatment resistant PTSD and further research is now required to determine its true effectiveness and optimal delivery.

Acknowledgements

The research team would like to express our sincere gratitude to a number of people and organisations, without whom this study could not have been completed.

We thank Forces in Mind Trust for funding the research costs of the study and the Welsh Government, through Health and Care Research Wales, for funding the NHS costs of the study.

We thank Eric Vermetten, Marieke van Gelderen and Mirjam Mink-Nijdam for their input to training, supervision, treatment fidelity checks and general advice and support.

We thank Vanessa Bailey, Clare Crole-Rees, Neil Kitchiner, William Watkins, Dean Whybrow and Victoria Williams for becoming 3MDR therapists and delivering 3MDR treatment so skilfully.

Finally, and most of all, we thank the participants of the study for taking part and joining us in our quest to develop more effective treatments for people with post-traumatic stress disorder.

A full report of the 3MDR study is being finalised and will be available to download from the following websites:

www.fim-trust.org/reports/

www.traumaticstressresearch.co.uk

