ISRCTN13593648 https://doi.org/10.1186/ISRCTN13593648

Nature-based intervention to improve mental health

Submission date
12/06/2024

Recruitment status
Recruiting

Registration date
19/06/2024

Overall study status
Ongoing

Last Edited
13/02/2026

Condition category
Mental and Behavioural Disorders

[ ] Prospectively registered
[X] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
Anyone who has experienced a traumatic event or episode in their life might develop post-traumatic stress disorder (PTSD) but it is particularly noted in military veterans who have seen combat and emergency service personnel, who experience trauma on a regular basis. PTSD is characterised by persistently feeling under threat and experiencing vivid memories, nightmares and 'flashbacks' of the trauma that may occur at any time. The aim of this study is to evaluate a new, engaging way to help people with PTSD recover their wellbeing. The researchers have worked with veterans who have lived with PTSD for many years and with veterans' support charities to develop a new intervention that involves learning to fish whilst socialising in small groups in a tranquil, rural setting. The idea behind this approach is threefold: First, being amongst people with similar experiences makes it easier to feel supported and understood and share concerns and memories. Second, natural environments are restorative and free from attention-grabbing triggers (such as unpredictable urban sounds that trigger flashbacks). Third, developing a skill encourages post-traumatic growth.
The ultimate purpose of this research is to test whether angling in a natural, social setting will improve the mental health of military veterans and other uniformed service personnel (e.g. police, ambulance, fire service, coastguard) with post-traumatic stress disorder (PTSD). The researchers are evaluating a new, engaging way to help people with PTSD recover their wellbeing and build their resilience that involves learning to fish while socialising in small groups in a tranquil, rural setting.

Who can participate?
Military veterans and/or emergency service personnel aged 18 years and over with PTSD symptoms

What does the study involve?
Participants are randomly allocated into either the fishing group or a waitlist control group, who do nothing during primary data collection and engage in the fishing intervention later. All participants are required to complete a 2-week pre-intervention questionnaire. During the intervention the fishing group participants engage in a 2-day/1-night social fishing event in a

natural setting. They will complete a further questionnaire and collect heart rate and eye movement data on the weekend when they arrive and when they depart. Following the intervention both groups complete a 2- and 4-week follow-up questionnaire.

What are the possible benefits and risks of participating?
Based on the findings from the developmental phase participating in the intervention has the great potential benefit of lowering PTSD symptoms compared to those in the control group. Furthermore, the developmental phase also showed significant improvements in anxiety, depression, wellbeing and feelings of loneliness for the fishing group compared to the control group. These benefits were also long-lasting as shown by 4-month follow-up questionnaires. Possible risks commonly associated with outdoor pursuits include: slips, trips and falls; waterside safety; immersion in water; waterborne infections; exposure to animal waste; thunder and lightning. Professional fishing coaches are provided on a ratio of two coaches to one participant and provide instruction about safe angling. In terms of mental health, as in the preliminary research, as part of the risk mitigation and safeguarding strategy, a mental health professional will attend to observe and monitor any signs of distress, but no psychological therapy will be offered during the intervention. The mental health professional's role will be to administer mental health "first aid" to any participants whose PTSD symptoms might be triggered during the day. First aid will include grounding techniques, emotional regulation procedures and psycho-education around the symptoms they may be experiencing. In the instance that mental health first aid is required, the participant will be given the option to withdraw or continue and a collaborative decision can be formed as to the future support required and then referrals to appropriate external services can be made if required.

Where is the study run from?
University of Essex (UK)

When is the study starting and how long is it expected to run for?
January 2024 to July 2027

Who is funding the study?
National Institute for Health and Care Research (NIHR) (UK)

Who is the main contact?
Nicholas Cooper, ncooper@essex.ac.uk

Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Integrated Research Application System (IRAS)
330850

Central Portfolio Management System (CPMS)
57114

Study information

Scientific Title
A nature-based intervention to improve mental health: efficacy of an angling intervention for military veterans and emergency service personnel with post-traumatic stress disorder

Study objectives
A nature-based, group-delivered angling intervention improves the mental health of military veterans and emergency service personnel (ESP) with post-traumatic stress disorder (PTSD) relative to controls.

Ethics approval required
Ethics approval required

Ethics approval(s)
1. Approved 09/02/2024, University of Essex Ethics Committee (REO Research Governance Team, Ethics Sub Committee 3) (Wivenhoe Park, Colchester, CO4 3SQ, United Kingdom; +44 (0) 1206 872169; reo-governance@essex.ac.uk), ref: ETH2324-0710

2. Approved 11/03/2025, Cambridge East Research Ethics Committee (Health Research Authority) (The Old Chapel, Nottingham, NG1 6FS, United Kingdom; +44 (0)207 104 8096, +44 (0) 207 104 8181, +44 (0)2071048037; cambridgeeast.rec@hra.nhs.uk), ref: 25/EE/0028

Primary study design
Interventional

Study design
Single-centre interventional single-blinded randomized waitlist-controlled study

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Post-traumatic stress disorder

Interventions

Participants engage in a 2-day/1-night social fishing event in a natural setting. Participants are randomised into either the fishing group or a waitlist control group (do nothing during primary data collection), who then engage in the fishing intervention at a later date. Simple randomisation is used with stratification (gender, PCL-5 score, vet/ESP status).

Intervention Type
Behavioural

Primary outcome(s)
1. PTSD symptoms measured with the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5)
2. Anxiety measured with the Generalised Anxiety Disorder Assessment (GAD-7)
3. Depression measured with the Patient Health Questionnaire (PHQ)-9
4. Positive feelings of wellbeing measured with the Short Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)
All measured at 2 weeks pre, 2 weeks, and 4 weeks post-intervention

Key secondary outcome(s)
1. Loneliness assessed using the Short Version of the Social and Emotional Loneliness Scale for Adults (SELSA-S) at 2 weeks pre, 2 weeks and 4 weeks post intervention
2. Expressed anger measured using the State–Trait Anger Expression Inventory (STAXI) at 2 weeks pre, 4 weeks, 6 months and 12 months post intervention
3. Impairment in general social functioning measured using the Work and Social Adjustment scale (WSAS) at 2 weeks pre intervention

Completion date
01/07/2027

Eligibility

Key inclusion criteria
Military veterans and/or ESPs with PTSD symptoms measured using the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5)

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
100 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
1. Not a military veteran
2. Not emergency services personnel
3. Participated in "Using angling to improve mental health in military veterans with post-traumatic stress disorder (ISRCTN43826813)"
4. Initial PCL5 score under 23

Date of first enrolment
01/03/2024

Date of final enrolment
01/01/2027

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
University of Essex Health Centre
University of Essex
Wivenhoe Park
Colchester
England
CO4 3SQ

Sponsor information

Organisation
University of Essex

ROR
https://ror.org/02nkf1q06

Funder(s)

Funder type
Government

Funder Name
National Institute for Health and Care Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan
Anonymised data will be shared in a publically available repository, the OSF data repository (https://osf.io/). The researchers will store fully anonymised raw SPSS data files. Consent for this is in the PIS and ethics forms. Data will be available after publication and will be freely available at any time thereafter from OSF.

IPD sharing plan summary
Stored in publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		13/02/2026	13/02/2026	Yes	No
Participant information sheet			13/06/2024	No	Yes
Protocol file			13/06/2024	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes