

# Nature-based intervention to improve mental health

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		<input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 19/06/2024	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 13/02/2026	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Individual participant data
		<input checked="" type="checkbox"/> 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](mailto:ncooper@essex.ac.uk)

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

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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

### Study design

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

### Primary study design

Interventional

### 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?
<a href="#">Protocol article</a>		13/02/2026	13/02/2026	Yes	No
<a href="#">Participant information sheet</a>			13/06/2024	No	Yes
<a href="#">Protocol file</a>			13/06/2024	No	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes