

# A study testing the effects of a stress-resilience training programme on the well-being of graduate-entry medical students

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<b>Registration date</b> 17/07/2025	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 15/07/2025	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Medical students often experience high levels of stress, anxiety, and burnout due to the demanding nature of their training. This study aims to explore whether a short, mindfulness-based programme called Enhanced Stress-Resilience Training (ESRT) can help graduate-entry medical students manage stress more effectively, build resilience, and feel better equipped to cope with the pressures of medical school.

### Who can participate?

The study is open to students enrolled on the Graduate Entry Medicine (GEM) programme at Swansea University Medical School. Students are typically aged 21 years or over and come from a range of educational and professional backgrounds.

### What does the study involve?

Participants are randomly assigned to one of two groups. One group takes part in the ESRT programme, which involves five weekly one-hour online sessions focusing on mindfulness, emotion regulation, and stress management. The other group takes part in weekly discussion sessions on health-related topics in medical education. All participants complete online questionnaires at three timepoints (before the programme, after 5 weeks, and again 6 months later). Some students are also invited to share their experiences in online interviews, written feedback, or focus groups.

### What are the possible benefits and risks of participating?

Participants may benefit from learning practical tools to manage stress and improve their well-being. Risks are minimal but may include temporary discomfort when reflecting on challenging emotions or experiences. Support is available if needed, and all participants continue to have access to standard university wellbeing services.

### Where is the study run from?

Swansea University Medical School (UK)

When is the study starting and how long is it expected to run for?  
July 2020 to July 2023

Who is funding the study?  
BMA Foundation for Medical Research (UK)

Who is the main contact?  
Prof. Andrew Kemp, a.h.kemp@swansea.ac.uk

## Contact information

### Type(s)

Public, Scientific, Principal investigator

### Contact name

Prof Andrew Kemp

### ORCID ID

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## Additional identifiers

Clinical Trials Information System (CTIS)  
Nil known

Protocol serial number  
2020-0044

## Study information

### Scientific Title

Enhanced stress-resilience training (ESRT) for graduate-entry medical students: a randomised-controlled, mixed-method investigation

### Acronym

ESRT4GEM

### Study objectives

To assess the effectiveness, sustainability, and acceptability of Enhanced Stress-Resilience Training (ESRT) in improving psychological wellbeing outcomes among graduate-entry medical students, and to identify key barriers and facilitators to engagement.

### **Ethics approval required**

Ethics approval required

### **Ethics approval(s)**

approved 21/09/2020, Swansea University Medical School Research Ethics Committee (Faculty of Medicine, Health and Life Science, Swansea University, Singleton Park, Swansea, SA2 8PP, United Kingdom; +44 (0)1792 602697; FMHLS-Ethics@swansea.ac.uk), ref: 2020-0044

### **Study design**

Randomized controlled trial

### **Primary study design**

Interventional

### **Study type(s)**

Prevention, Quality of life

### **Health condition(s) or problem(s) studied**

Psychological stress, burnout, and anxiety among medical students, with a focus on prevention and early intervention to enhance resilience, emotion regulation, and psychological flexibility

### **Interventions**

This randomised controlled trial allocates graduate-entry medical students to either Enhanced Stress-Resilience Training (ESRT) or an active control group. Participants attend five weekly 60-minute sessions delivered remotely via videoconferencing.

The ESRT group receives a structured mindfulness-based intervention adapted for time-pressured learners, delivered by a certified practitioner. Sessions include practices in breath awareness, interoception, meta-cognition, and emotional regulation.

The control group engages in weekly facilitated discussions on lay-press articles related to challenges in medical education, such as burnout, empathy, and clinical uncertainty.

Randomisation is computer-generated. All participants continue to receive standard pastoral support.

### **Intervention Type**

Behavioural

### **Primary outcome(s)**

Psychological flexibility measured using the Acceptance and Action Questionnaire 2 (AAQ2) at baseline (T1), post-intervention (T2), and 6-month follow-up (T3)

### **Key secondary outcome(s)**

1. Resilience measured using the 10-item version of the Connor-Davidson Resilience Scale (CD-RISC 10) at baseline (T1), post-intervention (T2), and 6-month follow-up (T3)
2. Stress reactivity measured using the Perceived Stress Reactivity Scale (PSRS) at baseline (T1),

post-intervention (T2), and 6-month follow-up (T3)

3. Acceptability, feasibility, and participant experience of ESRT assessed using qualitative data from online exit evaluations, one-on-one semi-structured interviews, and end-of-study focus groups following the 6-month follow-up (T3), analysed using reflexive thematic analysis

**Completion date**

27/07/2023

## **Eligibility**

**Key inclusion criteria**

1. Students on the graduate entry medical (GEM) programme at Swansea University Medical School (SUMS)
2. Because students have to have a first degree before enrolling on this programme the youngest they could be is 21 years old. Most students on the GEM programme are in the early to mid twenties age range but there is a small minority of more mature students who may be any age, rarely older than mid to late forties.

**Participant type(s)**

Learner/student

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

65 years

**Sex**

All

**Total final enrolment**

98

**Key exclusion criteria**

1. Individuals not enrolled on the graduate entry medical (GEM) programme at Swansea University Medical School
2. Students who were unable to commit to the intervention schedule or declined to participate

**Date of first enrolment**

05/04/2021

**Date of final enrolment**

16/11/2022

# Locations

## Countries of recruitment

United Kingdom

Wales

## Study participating centre

### Swansea University

Singleton Park

Swansea

United Kingdom

SA2 8PP

# Sponsor information

## Organisation

Swansea University

## ROR

<https://ror.org/053fq8t95>

# Funder(s)

## Funder type

Charity

## Funder Name

BMA Foundation for Medical Research

## Alternative Name(s)

BMA Foundation

## Funding Body Type

Private sector organisation

## Funding Body Subtype

Trusts, charities, foundations (both public and private)

## Location

United Kingdom

# Results and Publications

## **Individual participant data (IPD) sharing plan**

The datasets generated and analysed during the current study will be stored in a publicly available repository. Data accessible here: [https://osf.io/f58ar/?view\\_only=0bc1365c4ab64a6c90e2182427f28c0e](https://osf.io/f58ar/?view_only=0bc1365c4ab64a6c90e2182427f28c0e)

## **IPD sharing plan summary**

Stored in publicly available repository