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Trial investigating the effects of a brief online uncertainty tolerance training for young people

Submission date
30/05/2026

Recruitment status
No longer recruiting

Registration date
02/06/2026

Overall study status
Ongoing

Last Edited
01/06/2026

Condition category
Mental and Behavioural Disorders

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

Plain English summary of protocol
Background and study aims
Adolescents and young adults have an increased vulnerability to mental health problems. Psychological problems in young people have also risen over the past few decades, which has in part been attributed to increased global uncertainty. Given the substantial uncertainties young people face in their daily lives, determining how to improve their ability to cope with uncertainty is essential.

This study aims to investigate the effects of Uncertainty-Mindset Training (UMT) for older adolescents/emerging adults (i.e., 18–24-year-olds). The UMT is a brief online informational program which aims to increase tolerance of uncertainty. The UMT will be compared to a control training to determine its effects on a range of outcomes up to 3 months later.

Who can participate?
Individuals aged 18 to 24 years with native English fluency and no history of traumatic brain injury, epilepsy/seizures, or learning difficulties. Participants will be recruited from Prolific, a platform that helps researchers recruit participants for their online research, and must have a 95-100% approval rate, have completed at least 20 prior studies but not one of the related studies run by the research team, and live in either the UK, US, Australia, New Zealand, Canada, Ireland, or South Africa.

What does the study involve?
Participants will be recruited from Prolific to complete the 4-part study. In part 1 (baseline, training, and immediately post-training), participants will first complete a set of questionnaires and a decision-making task. They will then be randomly allocated to complete either the Uncertainty-Mindset Training or Mind and Brain Training. This will be followed by another set of questionnaires. In part 2 (completed two weeks after part 1), participants will complete a set of questionnaires and decision-making task. In parts 3 and 4 (one and three months following part 1, respectively), participants will complete a set of questionnaires.

What are the possible benefits and risks of participating?
There is no guarantee that taking part will benefit any or all individuals. The training programs may increase knowledge about psychologically related processes, and participation could help

us understand how to better help others. A potential risk of taking part is that participants may experience distress and worse mood when reflecting on their experiences whilst or after completing the questionnaires and/or the trainings, but participants can skip any questions and withdraw from the study at any point.

Where is the study run from?
The University of Cambridge, UK.

When is the study starting and how long is it expected to run for?
June 2026 and will run for approximately 3 months to October 2026.

Who is funding the study?
The MRC Cognition and Brain Sciences Unit, UK.

Who is the main contact?
Sarah Daniels, Sarah.Daniels@mrc-cbu.cam.ac.uk

Contact information

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Public, Scientific

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Additional identifiers

Open Science Framework
https://osf.io/6emyp

Study information

Scientific Title
A randomised controlled trial investigating whether the single session online Uncertainty-Mindset Training improves tolerance of uncertainty and anxiety symptoms greater than a control training in 18- to 24-year-olds

Study objectives
This study aims to investigate the effects of the Uncertainty-Mindset Training (UMT) for older adolescents/emerging adults (i.e., 18-24 year olds). Primarily, this study seeks to understand whether it reduces intolerance of uncertainty and anxiety symptoms. Secondarily, this study seeks to determine the effects of the UMT on depression symptoms, negative affect, and growth mindsets. Further, the study aims to examine whether changes in intolerance of uncertainty account for the effects of the UMT on mental health symptoms and negative affect.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 06/05/2026, University of Cambridge Psychology Research Ethics Committee (Department of Psychology, Downing Street, University of Cambridge, Cambridge, CB2 3EB, United Kingdom; +44 01223 333550; SBSEthics@admin.cam.ac.uk), ref: PRE.2025.060

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Open (masking not used)

Control
Active

Assignment
Parallel

Purpose
Prevention, Treatment

Study type(s)

Health condition(s) or problem(s) studied
Reduction of intolerance of uncertainty and anxiety symptoms in an unselected population (i.e., with or without a psychiatric condition).

Interventions
Participants will be randomised in a 1:1 allocation to receive either the Uncertainty-Mindset Training or the control Mind and Brain Training. This will be done using the Qualtrics randomizer element with the even presentation setting.

Uncertainty-Mindset Training: This approximately 30-minute online program presents information in text and video format about how uncertainty can be beneficial (aiming to promote uncertainty-as-adaptive mindsets and encouraging the reappraisal of uncertainty as not inherently negative but potentially useful), the malleability of uncertainty tolerance (aiming to promote uncertainty tolerance growth mindsets i.e., that IU can be improved through processes such as neuroplasticity), and strategies for facing uncertainty (e.g., goal setting, acceptance, reappraisal). Interactive free text questions are also dispersed throughout asking people about their personal experiences and to advise others about facing uncertainty.

Mind and brain control training: This approximately 30-minute online program includes information on psychologically related topics about the brain and mind (e.g., cognitive biases, sleep, emotions, etc.). The information is also presented in text and video format, with interactive free text questions throughout asking people to recall presented information, provide examples, and share their thoughts on the program. This control training has been developed to not target tolerance of uncertainty.

Intervention Type
Behavioural

Primary outcome(s)
1. Intolerance of uncertainty measured using the 12-item Intolerance of Uncertainty Scale (IUS-12) at 3 months

2. Anxiety symptoms measured using the 7-item Generalised Anxiety Disorder Scale (GAD-7) at 3 months

Key secondary outcome(s)
1. Intolerance of uncertainty measured using the 12-item Intolerance of Uncertainty Scale (IUS-12) at baseline, immediately post-training, 2 weeks, and 1 month

2. Anxiety symptoms measured using the 7-item Generalised Anxiety Disorder Scale (GAD-7) at baseline, 2 weeks, and 1 month

3. Depression symptoms measured using the 8-item Patient Health Questionnaire (PHQ-8) at baseline, 2 weeks, 1 month, and 3 months

4. Negative affect measured using two items (capturing distressed and anxious affect) at baseline, immediately post-training, 2 weeks, 1 month, and 3 months

5. Growth mindsets about uncertainty tolerance measured using three novel items at baseline, immediately post-training, 2 weeks, 1 month, and 3 months

6. Repetitive negative thinking measured using the 15-item Perseverative Thinking Questionnaire (PTQ) at baseline, 2 weeks, 1 month, and 3 months

7. Uncertainty-related functioning measured using five items at baseline, 2 weeks, 1 month, and 3 months

8. Affective responses to uncertainty across domains measured using the Affective Responses to Daily Uncertainty Scale (ARDUS) at baseline, 2 weeks, 1 month, and 3 months

9. Uncertainty engagement measured using two items (capturing uncertainty reappraisal and avoidance) at baseline, 2 weeks, 1 month, and 3 months

10. Uncertainty avoidance, exploration, and task-related mood measured using an explore-exploit foraging task at baseline and 2 weeks

Completion date
08/10/2026

Eligibility

Key inclusion criteria
1. Aged 18-24 years
2. Native English fluency
3. No history of traumatic brain injury
4. No history of epilepsy/seizures
5. No learning difficulties
6. Live in one of the following countries: UK, US, Australia, New Zealand, Canada, Ireland, South Africa
7. 95-100% approval rate on Prolific
8. Minimum of 20 prior studies completed on Prolific
9. Not previously recruited for the related studies run by research team

Healthy volunteers allowed
Yes

Age group
Adult

Lower age limit
18 Years

Upper age limit
24 Years

Sex
All

Total final enrolment

0

Key exclusion criteria
1. Fail 2 or more attention checks at any assessment
2. Submit an exceptionally fast study response (3 SD or below the mean response time of the sample)

Date of first enrolment
08/06/2026

Date of final enrolment
08/07/2026

Locations

Countries of recruitment
United Kingdom

England

Australia

Canada

Ireland

New Zealand

South Africa

United States of America

Study participating centre
MRC Cognition and Brain Sciences Unit
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Sponsor information

Organisation
MRC Cognition and Brain Sciences Unit

ROR
https://ror.org/055bpw879

Funder(s)

Funder type

Funder Name
MRC Cognition and Brain Sciences Unit

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study will be stored in a publicly available repository (OSF).

IPD sharing plan summary
Stored in publicly available repository