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Building resilience through socio-emotional training

Submission date
15/03/2023

Recruitment status
No longer recruiting

Registration date
20/04/2023

Overall study status
Completed

Last Edited
27/07/2026

Condition category
Mental and Behavioural Disorders

[_] Prospectively registered
[X] Protocol
[X] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Adolescence is a period where individuals are at higher risk of developing mental health problems, and rates of mental health disorders have increased in this age group in the last decade. Recently, it has been suggested that an approach that addresses common processes underlying risk for a variety of mental health conditions may be fruitful for targeted prevention and early intervention. Our intervention tackles two areas that are involved in maintaining good mental health, and can also put teenagers at risk for experiencing poor mental health. Specifically, we aim to address the ability to process and regulate emotions, and the ability to maintain positive social relationships. In the past, these two areas have been studied in isolation; our intervention aims to study the interplay of emotion processing and social relationships. We will examine how a novel intervention that addresses these two components might improve mental health in adolescence.

Who can participate?
Teenagers between the ages of 12-14 years old (school years 7-9), who have a heightened risk of developing mental health problems will be eligible to take part in our study. Teenagers are recruited from schools that have 30% or more students who meet the eligibility criteria for free school meals to ensure there is diversity in our sample.

What does the study involve?
Our study will involve a new intervention that combines group-based sessions with established computerised cognitive-emotional training exercises. The group-based sessions teach teenagers important social skills to maintain and improve their social relationships. The computerised training will improve adolescents' ability to recognise and manage their emotions, both of which have been implicated in poor mental health outcomes. The groups take place over 8 weeks and require adolescents to roleplay issues they are experiencing in their lives and consider different ways these issues might be resolved. Before, after and at a 1-year follow-up, we will take measures of teenagers' mental health, their emotional processing, and their social relationships to examine whether our intervention improves outcomes for those who take part.

What are the possible benefits and risks of participating?
In terms of benefits, we hope that adolescents will learn valuable skills that enable them to

create strong friendships and positive social relationships. They will also play an invaluable role in shaping the future of our new training programme. We don't believe that there are any risks in taking part. All researchers have enhanced DBS checks and are well-experienced in working with young people. Our team members are trained to identify and support any young person experiencing distress. Should this occur during any research activities, we will refer the individual to the key contact at their school. We have a strict safeguarding protocol to keep researchers and participants safe.

Where will the study run from?
University College London; the intervention is delivered within participating schools

When is the study starting and how long is it expected to run for?
November 2020 to July 2025

Who is funding the study?
UK Research and Innovation (UK)

Who is the main contact?
1. Professor Pasco Fearon (p.fearon@ucl.ac.uk)
2. Professor Essi Viding (e.viding@ucl.ac.uk)

Contact information

Type(s)
Principal investigator

Contact name
Prof Pasco Fearon

ORCID ID
https://orcid.org/0000-0003-1847-8443

Contact details
Research Department of Clinical, Educational and Health Psychology
1-19 Torrington Place
London
United Kingdom
WC1E 7HB
+44 (0) 20 7679 1244
p.fearon@ucl.ac.uk

Type(s)
Principal investigator

Contact name
Prof Essi Viding

ORCID ID
https://orcid.org/0000-0001-8468-8874

Contact details

Room BW 238
26 Bedford Way
London
United Kingdom
WC1H 0AP
+44 (02)0 7679 5874
e.viding@ucl.ac.uk

Type(s)
Public

Contact name
Ms Laura Lucas

ORCID ID
https://orcid.org/0000-0002-9470-5284

Contact details
Clinical, Educational and Health Psychology,
26 Bedford Way
London
United Kingdom
WC1H 0AP
+44 (0)20 7679 4241
l.a.lucas@ucl.ac.uk

Type(s)
Scientific

Contact name
Prof Pasco Fearon

Contact details
Research Department of Clinical, Educational and Health Psychology
1-19 Torrington Place
London
United Kingdom
WC1E 7HB
+44 (0) 20 7679 1244
p.fearon@ucl.ac.uk

Type(s)
Scientific

Contact name
Dr Alex Lloyd

ORCID ID
https://orcid.org/0000-0003-0627-0952

Contact details

Room 236
26 Bedford Way
London
United Kingdom
WC1H 0AP
+44 (0)7530273953
alexander.lloyd@ucl.ac.uk

Type(s)
Scientific

Contact name
Dr Chin-Han (Tom) Wu

ORCID ID
https://orcid.org/0000-0002-3468-0943

Contact details
-
London
United Kingdom
-
+44 (0)7852408377
chin-han.1.wu@kcl.ac.uk

Additional identifiers

Integrated Research Application System (IRAS)
322531

Study information

Scientific Title
Developing a school-based, transdiagnostic, preventative intervention for adolescent mental health

Acronym
ReSET

Study objectives
1. Our novel hybrid programme will lead to better mental health and well-being outcomes in high-risk adolescents (highest 25% of general psychopathology risk), compared to those in the non-intervention arm.
2. The impact of the hybrid intervention will be mediated, in part, by changes to emotion processing and social relationships. Specifically, the impact of the intervention will be mediated by:
2.1. A shift in emotion perception to view fewer faces as hostile.
2.2. A better ability to regulate emotions when presented with negative stimuli.
2.3. Improved peer acceptance and attachment with parental figures and friends, as well as decreased peer victimization.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 22/02/2022, University College London Ethics Committee (Office of the Vice Provost Research, 2 Taviton Street, University College London, WC1E 6BT, UK; +44 (0)20 7679 8717; ethics@ucl.ac.uk), ref: 21815/001

Primary study design
Interventional

Study design
Blind cluster randomized allocation study

Study type(s)
Prevention

Health condition(s) or problem(s) studied
General psychopathology

Interventions
The study involves a new psychosocial intervention combining Interpersonal Therapy – Adolescent Skills Training (ISP-AST) and established, computerised cognitive-emotional training demonstrated to improve mental health outcomes. IPT-AST is an intervention that has been successfully utilised with adolescents with depression and other internalising disorders. The cognitive-emotional training component of the intervention employs computerised modules targeting emotion interpretation (interpretation bias training), which has been shown to successfully reduce internalising and externalising symptoms in adolescents, as well as emotion regulation training, which has been used to reduce negative affect in adolescents.

Participants will be randomised to the intervention or control groups in a blind cluster randomised design. Specifically, we will randomly allocate one school year group to receive the intervention whereas the other year group will be allocated to the control condition. A statistical programme to generate a randomised list of permuted blocks will be written by the project statistician using the R Software for Statistical Computing. This programme will then be used by an independent statistician not involved in the study to generate a randomized list. The independent statistician will use a new seed number to generate the list and pass this on to the trial manager. The trial manager will use the list to allocate year groups to treatment arms, going down the list in the order in which schools are ready to be randomized.

Participants will complete the two cognitive-emotional training activities - interpretation bias training and emotion regulation training - delivered via tablets. The training activities will take place in group-based settings, led by a trained facilitator. This facilitator will also support the participants through ISP-AST intervention activities, including discussion and roleplays. The materials used for the intervention and training of providers are still in development but will be made available upon publication of the study.

With regards to the procedure, the intervention will begin with young people having an individual meeting with the group facilitator to discuss the aims of the groups, their goals for taking part, and any questions they have about the sessions. These individual meetings will be used to identify where the young person may be experiencing interpersonal difficulties that can

be addressed in the group sessions. Issues arising from interpersonal difficulties will be set as explicit goals by the young person (with the aid of the facilitator). This will allow the young people to self-monitor their progress throughout the duration of the intervention.

Each of the group sessions will begin with participants completing the Child Outcome Rating Scale (CORS), a clinical measure designed to monitor an individual's progress during the therapeutic process. The CORS measures several domains of the young person's life functioning, including their individual wellbeing, interpersonal wellbeing, social role, and overall wellbeing. The CORS has been validated with adolescents aged 11-15 which includes the population we will recruit for our study. Clinical cut-offs will be used by facilitators to identify young people who may need additional support during the group, or those that may benefit from more targeted services. The CORS will also be utilised during the intervention sessions to consider links between the strategies discussed in the sessions, their impact on how participants communicate with those around them, and the relationships between social interactions and wellbeing. Drawing links between social interactions and wellbeing will be a core component of the psychoeducation content covered around communication in the intervention. The CORS takes approximately 2 minutes to complete.

Aside from the cognitive-emotional training tasks, the main body of the group sessions will include a mixture of discussion activities, role-plays, and reflective exercises. These draw on principles from IPT-AST and integrate these with consideration of the role that cognitive-emotional processing plays in one's social interactions. The sessions will aim to teach participants about effective communication and cognitive-emotion processing strategies that can improve social relationships and subsequently mental health. Sessions will end with participants being provided with homework to complete before the next session. The eight sessions will be structured to gradually introduce participants to the psychoeducation content in early sessions before they are encouraged to apply the skills developed to their personal experiences.

The initial phase of the intervention will take place during sessions 1-4. During these sessions, participants will be introduced to the cognitive-emotional training tasks and instructed on how to complete them. Participants will also be introduced to core concepts within the intervention; namely, the links between social relationships, emotion processing and wellbeing. Participants will be guided to explore the impact their interactions can have on those around them, which will be used to identify opportunities to utilise adaptive communication or emotion-processing skills. In sessions 2-4, participants will be provided with specific communication and emotion-processing strategies designed to improve interpersonal interactions. Strategies will be introduced that either has an intra-personal focus (e.g., breathing to calm themselves down before responding) which are referred to as 'Me Strategies', or an interpersonal focus (e.g., picking the right time to have a conversation with another individual) which are referred to as 'We Strategies'. Using role-plays of fictional scenarios, participants will identify moments where features of interaction led to a dispute or difficulty and are encouraged to consider alternative ways to approach the scenario using the "Me" and "We" Strategies. The fictional scenarios that will be used in the current intervention were developed in collaboration with a separate group of young people who did not take part in the intervention.

In each session, participants will complete an emotion regulation training task and in sessions, 2-7 participants complete an emotion interpretation bias training task. Each of these tasks is delivered via a tablet that is provided to schools by the research team. From session four onwards, participants also complete breathing exercises designed to train the ability to identify their internal bodily signals, which is aimed at improving participants' interoceptive abilities (Weng et al., 2021). The intervention will include specific psychoeducational content around the

features of emotion processing that the cognitive-emotional training tasks target so that young people understand how the training relates directly to the “Me” and “We” strategies discussed in the group. In sessions 2-4, the group leader will facilitate activities to discuss how the cognitive-emotional mechanisms trained using the tasks (e.g., emotion perception) relate to our daily experiences, including interactions with those around us. The group leader will encourage participants to identify opportunities to use the skills developed through the cognitive-emotional training battery to improve their interpersonal interactions.

The middle sessions of the intervention (sessions 5 and 6) are designed to encourage participants to actively apply the “Me” and “We” Strategies to scenarios relevant to their lives. The scenarios that the young people discuss are intended to be relevant to the goals they identified in the individual meetings prior to the group sessions to support them to achieve these goals. The group facilitator will guide participants to dissect conversations the participant has had and plan future interactions using the strategies outlined in sessions 1-4. The group facilitator will encourage participants to consider how different strategies can be used in combination, with the aim of providing participants with a ‘toolkit’ of adaptive communication and emotion processing strategies that improve their interactions with individuals in their lives. Participants will be tasked with homework to practice conversations at home and report how these interactions went in the following session.

The closing sessions (sessions 7 & 8) of the intervention are designed to prepare participants to be self-sufficient in their use of these strategies, rather than relying on prompts from the group sessions. In these closing sessions, the group leader will review which of the communication and emotion-processing skills have been useful and will work with participants to identify methods that encourage the self-generated use of these strategies outside of the sessions. During these final sessions, the young people will be asked to rate their progress on the goals they identified prior to starting the group sessions as a reflective exercise.

Intervention Type
Behavioural

Primary outcome(s)
1. Psychopathology measured using the Total Difficulties Score of the Strengths and Difficulties Questionnaire at baseline, post-intervention follow-up and at a 12-month follow-up
2. Mental wellbeing measured using the summary score of the Warwick and Edinburgh Mental Wellbeing Scale (WEMWBS) at baseline, post-intervention follow-up and at a 12-month follow-up

Key secondary outcome(s)
The following secondary outcome measures are assessed immediately pre-intervention, immediately post-intervention and at a 1-year follow-up, unless stated:
1. Child mental health, strengths and difficulties measured using the strengths and difficulties questionnaire (SDQ) and Me and My Feelings questionnaire
2. Depression measured using the Patient Health Questionnaire
3. Anxiety measured using the Generalised Anxiety Disorder Assessment-7
4. Alcohol and drug use disorders measured using the Alcohol Use Disorders Identification Tests (AUDIT) and Drug Use Disorders Identification Tests (DUDIT)
5. Emotion perception measured using the interpretation bias task, emotional intensity morphing task, and attributional styles questionnaire
6. Emotion regulation, measured using two emotion reappraisal tasks (one based on scenarios and another based on images) and the Emotion Regulation Questionnaire for Children and Adolescents

7. Interoceptive awareness measured using the Phase Adjustment Task, the interoceptive awareness scale and the interoceptive attention scale
8. Academic pressure measured using an 8-item questionnaire asking how much pressure the young person feels in relation to their schoolwork
9. Sleep phenotype measured using a bespoke questionnaire comprised of items from the Pittsburgh Sleep Quality Index, and several novel items designed to assess insomnia in a developmental sample
10. Participants' friendship networks measured using peer nominations. Participants will be asked to nominate: i) Who in your year are your best friends? ii) Who are the most popular kids in your year? iii) Which kids in your year group do you like? iv) Which kids in your year do you dislike? Two additional questions are also included to assess the effects of the intervention: i) Who gives good advice to you when you are feeling upset? ii) Who in your year makes others feel accepted/like they belong? These measures will be collected in a full sweep of the year group before the first intervention group and again after the final intervention group has been run in each school.
11. Self-perception measured using three questions from the Social Network Analysis of Risky Behaviors in Early Adolescence (SNARE)
12. Parent and peer attachment measured using the inventory of parent and peer attachment

Completion date
14/07/2025

Eligibility

Key inclusion criteria
Eligible participants will include pupils:
1. In Years 7-8 (aged 11-13 years old) at the time of the first baseline assessment
2. Whose primary carer has consented for them to participate

Schools will be eligible for inclusion:
If 30% or more students meet the eligibility criteria for free school meals, which ensures the sample is socioeconomically diverse

Participant type(s)
Healthy volunteer

Healthy volunteers allowed
No

Age group
Child

Lower age limit
11 Years

Upper age limit
13 Years

Sex
All

Total final enrolment
560

Key exclusion criteria
Pupils are considered ineligible if:
1. They have high rates of school absence
2. Are identified by the school as being inappropriate for the group intervention due to a high risk of harm to themselves or others

Date of first enrolment
09/03/2023

Date of final enrolment
31/05/2024

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
The Sydney Russell School
Parsloes Avenue
Dagenham
England
RM9 5QT

Study participating centre
Edmonton County School
Little Bury Street
London
England
N9 9JZ

Study participating centre
Barnhill Community High School
Yeading Lane
Hayes
England
UB4 9LE

Study participating centre
Southbank Academy
Trafalgar Street
London
England
SE17 2TP

Study participating centre
City of London Academy (southwark)
240 Lynton Road
London
England
SE1 5LA

Study participating centre
Featherstone High School
11 Montague Waye
Southall
England
UB2 5HF

Study participating centre
Villiers High School
Boyd Avenue
Southall
England
UB1 3BT

Study participating centre
Alec Reed Academy
Bengarth Road
Northolt
England
UB5 5LQ

Study participating centre
The Charter School East Dulwich
Jarvis Road
East Dulwich

London
England
SE22 8RB

Study participating centre
Debden Park High School
Willingale Road
Debden
Loughton
England
IG10 2BQ

Study participating centre
Folkestone Academy
Academy Lane
Folkestone
England
CT19 5FP

Study participating centre
The Royal Harbour Academy - Lower site
Newlands Lane
Ramsgate
England
CT12 6RH

Study participating centre
The Royal Harbour Academy - Upper Site
Marlowe Way, Newington
Ramsgate
England
CT12 6FA

Sponsor information

Organisation
University College London

ROR

https://ror.org/02jx3x895

Funder(s)

Funder type
Government

Funder Name
UK Research and Innovation

Alternative Name(s)
UKRI

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

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 (Open Science Framework: https://osf.io/34jur/).

The study team will store study data from participants including demographic information (DOB, sex, gender, pubertal status, ethnicity), and primary and secondary outcomes. Data will be made publicly available 12 months after the study end date of 31/08/25, meaning data will be made publicly available on 31/08/2026. Please note, the 'study end date' reflects the end of the project funding, rather than the final data collection date. All participants were required to complete a consent form asking whether they consented to their data being made publicly available. All data will be pseudonymised. We will not be able to make data available from participants who do not consent to their data being shared on a public repository. Therefore, we cannot guarantee the publicly available data will contain all study participants.

IPD sharing plan summary
Stored in publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		23/02/2024	26/02/2024	Yes	No
Basic results			15/07/2026	No	No

Statistical Analysis Plan	version 1	29/08/2024	29/08/2024	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes