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Understanding how emotional resilience develops and is strengthened in children: an East London cohort

Submission date	Recruitment status	[X] Prospectively registered
23/09/2022	No longer recruiting	[X] Protocol
Registration date	Overall study status	[_] Statistical analysis plan
26/09/2022	Ongoing	[_] Results
Last Edited	Condition category	[_] Individual participant data
16/07/2025	Mental and Behavioural Disorders	[X] Record updated in last year

Plain English summary of protocol

Background and study aims

Resilience is a dynamic process that refers to the capacity of individuals to prevent, overcome, and even thrive following the experience of challenging events. Resilience can be thought of as an individual characteristic, like perseverance or grit, but also includes the opportunities to access social and community resources. Although there is growing evidence around resilience in adolescents, much less is known about resilience and how it develops at even earlier ages such as preadolescence. Understanding resilience in this group would help us to identify those who may not be as well equipped to deal with challenges and to intervene early to support them. Understanding factors associated with resilience may help to inform prevention programmes and planning of resources to reduce negative outcomes. Finally, understanding these factors in preadolescence would allow us to propose a developmentally-appropriate theory of resilience.

Who can participate?

Children from Years 3, 4, and 5 (aged 7-11 years at recruitment) who are attending participating primary schools in East London

What does the study involve?

Children will be assessed at least once a year on factors associated with resilience. Teachers and parents/carers will be asked to complete questionnaires on the enrolled children once a year.

What are the possible benefits and risks of participating?

Participation in research may be of potential benefit to participants struggling with emotional or behavioural difficulties, as it a) sheds light on factors that could boost resilience and therefore well-being, b) contributes to the development and planning of research programmes or resources to support these children, families and teachers/schools, and c) provides children with a voice, through research, about their experiences. Moreover, understanding of early signs of reduced emotional resilience in this age group could predict reduced well-being and increased mental health problems across the lifespan.
To realise this possibility fully, the researchers will work closely with each school to embed our study in a whole-school approach to mental health. As there is variability in how schools

currently promote mental well-being and deliver mental health support, the researchers will tailor their approach for each individual school, working with the schools' mental health lead or nominated mental health champion. Through the dissemination Science Show co-organised with the Centre of the Cell (https://www.centreofthecell.org), children will also benefit from science education, particularly around the science of mental health.

The researchers do not foresee any significant ethical, legal or management issues arising from this study. However, as the study focuses on resilience, they will include measures of common mental health symptoms (e.g., anxiety, depression) in children, as well as measures of stress (e.g., negative life events) as well as measures of factors that are hypothesised to contribute to resilience. There is a possibility that children become distressed when completing such measures. To mitigate this possibility, the researchers have selected questionnaires that are commonly used in this age range, and which have not, in our experience nor in the experience of other researchers in the field, typically led to distress in children. They will also balance questionnaires that ask about mental distress with ones that ask about positive mental health (e.g., well-being). For measures of stress, they will mostly rely on parent reports to identify recent negative life events; to probe children's perceptions of stressful events, they will use a body mapping technique, which allows children to choose which events they want to highlight, thus giving them control and agency over what they want to reflect on.

Another risk is that children may disclose issues relating to risk to themselves or to others, even without us directly asking about these behaviours. Under some of these circumstances, the researchers will have to break confidentiality. If a child discloses risk, the researchers will explain to the child that they are concerned about their well-being and that they want to discuss these issues with their trusted member of school staff or their parent/carer. Moreover, they will follow the Unit's safeguarding plan and will develop a study-specific risk management plan to mitigate those risks. the researchers will discuss the Unit safeguarding plan with the safeguarding lead at the schools. All members of the research team will be fully trained on the safeguarding and risk management plan, and all disclosures will be discussed with Professors Lau (PI) and Professor Ougrin, an experienced child and adolescent psychiatrist and a member of the crisis team at the South London and Maudsley NHS Foundation Trust.

In answering questions about their children's mental health, parents may also become concerned or distressed about their child. Although most measures completed by parents will be about their child and family, they will also complete a brief checklist about their own history of and current mental health problems. This may elicit distress in some parents. A comprehensive list of resources and organisations that can support the parent has been compiled in conjunction with experts in schools' mental health, and this will be given to all parents in the study. Although it is unlikely, it is nonetheless possible that parents may also reveal that their child is at risk of self-harm. If this happens, they will be asked to contact the PI or senior member of the research team for advice. Professor Dennis Ougrin has specialist expertise in the area of child and adolescent self-harm. If parents reveal that the child is at imminent risk, the researchers will advise the parent to accompany the child to the nearest appropriate emergency department.

Finally, there is a small possibility that children may disclose narratives that are upsetting to the researchers. To mitigate any emotional impact of conducting assessments with children, researchers have the opportunity to fully debrief with the more experienced members of the research team.

Where is the study run from?

The Youth Resilience Unit, Newham Centre for Mental Health (UK)

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

April 2022 to December 2026

Who is funding the study?
Barts Charity (UK)

Who is the main contact?
Dr Francois van Loggerenberg, f.vanloggerenberg@qmul.ac.uk

Contact information

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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

Protocol serial number
YRU001

Study information

Scientific Title
The development of emotional resilience in children from East London: an observational cohort study to better understand how personal traits, social relationships and external resources co-act to influence resilience trajectories

Acronym
DEER

Study objectives
Resilience is a dynamic process that refers to the capacity of individuals to prevent, overcome and even thrive following the experience of challenging events. Resilience outcomes can be

captured through functioning in different domains but here we focus on emotional resilience, which can reflect the presence of an adaptive outcome (well-being, life satisfaction) or the absence of a negative outcome (mental illness) following the experience of stress (internal or external). Resilience can be conceptualised as an individual characteristic (e.g., grit, perseverance, determination) but also includes opportunities to harness and navigate access to culturally relevant external resources (e.g., contact seeking, participation in community groups). While there is a growing body of literature measuring and tracking emotional resilience (good mental well-being and absence of psychopathology following stress), and the factors and resources that contribute towards it in adolescence and young adulthood, there is notably less research on the nature of resilience and how and when it develops at even earlier stages of development such as pre-adolescent childhood.

A study of emotional resilience as it emerges across middle and late childhood into early adolescence, and the factors that predict early resilience trajectories, would be an invaluable addition to the field for several reasons. First, early signs of reduced emotional resilience could predict reduced well-being and increased mental health problems and their impact in youth, enabling us to identify those who are less well equipped to manage the challenges and opportunities of adolescence – and in turn, across the lifespan. Second, understanding factors contributing towards the development of emotional resilience could help with the development of preventative programmes and the planning of resources to reduce negative outcomes across the lifespan. Finally, as resilience reflects “the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development”, it is likely that its nature and “core components” vary in childhood compared to adolescence and adulthood. A better understanding of emotional resilience in mid-to-late childhood would allow us to propose developmentally sensitive theories of resilience. Having the youngest and most diverse population in the UK, while also being historically underserved in research, makes East London the perfect location for the timely addition of a new cohort study.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 27/06/2022, Queen Mary Ethics of Research Committee (Elizabeth Chuck, Joint Research Management Office, Dept. W., Queen Mary University of London, Mile End Road, E1 4NS, UK; +44 (0)20 7882 7915; research-ethics@qmul.ac.uk), ref: QMERC22.251

Study design
Accelerated longitudinal observational cohort study

Primary study design
Observational

Study type(s)
Other

Health condition(s) or problem(s) studied
Resilience in preadolescent children in East London

Interventions
Current interventions as of 16/09/2024:
The design will be an accelerated longitudinal design. The researchers will invite 1200 children

from Years 3, 4, and 5 (aged 7-11 years) who are attending primary schools in East London to take part in the study. They will assess each child at least once a year until they reach the end of their first term of secondary school. To recruit this number, they will approach primary schools located in East London. The aim is to recruit 400 children from each year group. By the end of the study, children in Year 3 will have been followed up for a period of 5 years, Year 4 pupils will be followed up for 4 years, and Year 5 pupils will be followed up for 3 years. The researchers will also invite, once per study year, parents/carers and teachers to complete questionnaires to complement children's self-reported measures. The study is expected to last for a total of 5 years. The assessment period for each year group may be subject to change depending on when the specific schools will be recruited. Regardless, the researchers will conduct follow-up assessments at least once a year.

All assessments intended for the child to complete will be done in the classroom. Depending on the availability of space in the school, these will be done in small groups but with privacy. We will either administer tasks on a tablet or on paper. Research assistants will read the instructions for each task out loud so that pupils have an opportunity to ask questions in case the instructions are not clear to them. Research assistants will also be available to read any words that children are unfamiliar with or do not understand.

Primary measures of resilience and mental health will be completed at least annually (termed follow-up assessment). Measures about psychological, social factors and resources available to children will only be completed at the first time-point of every year (termed the full assessment). The researchers anticipate the total length of time for completing the first assessment battery of the year to be about 3 hours for children, however, this will be done over at least two sessions (possibly three), negotiating this around any other classroom commitments.

Teachers and parents/carers will also be given questionnaires to complete in their own time. Teachers complete these on paper and parents access and complete them using an online platform (Qualtrics and/or REDCap). Parent assessments are anticipated to take approximately 30 minutes, while teacher assessments will take about 10 minutes per child (who consents to participate).

Previous interventions:
The design will be an accelerated longitudinal design. The researchers will invite 1200 children from Years 3, 4, and 5 (aged 7-10 years) who are attending primary schools in East London to take part in the study. They will assess each child twice per school year (approximately every 6 months) until they reach the end of their first term of secondary school. To recruit this number, they will approach primary schools located in East London. The aim is to recruit 400 children from each year group. By the end of the study, children in Year 3 will have been followed up for a period of 5 years, Year 4 pupils will be followed up for 4 years, and Year 5 pupils will be followed up for 3 years. The researchers will also invite, once per study year, parents/carers and teachers to complete questionnaires to complement children's self-reported measures. The study is expected to last for a total of 5 years. The assessment period for each year group may be subject to change depending on when the specific schools will be recruited. Regardless, the researchers will conduct follow-up assessments approximately every 6 months (± 2 months).

All assessments intended for the child to complete will be done in the classroom. Depending on the availability of space in the school, these will be done in small groups but with privacy. We will either administer tasks on a tablet or on paper. Research assistants will read the instructions for each task out loud so that pupils have an opportunity to ask questions in case the instructions are not clear to them. Research assistants will also be available to read any words that children are unfamiliar with or do not understand.

Primary measures of resilience and mental health will be completed approximately every 6 months (± 2 months, termed follow-up assessment). Measures about psychological, social factors and resources available to children will only be completed at the first time-point of every year (termed the full assessment). The researchers anticipate the total length of time for completing the first assessment battery of the year to be about 3 hours for children, however, this will be done over at least two sessions (possibly three), negotiating this around any other classroom commitments. Subsequent 6-month assessments will only take about 30 minutes.

Teachers and parents/carers will also be given questionnaires to complete in their own time. These will be accessed and completed using an online platform (Qualtrics). Parent assessments are anticipated to take approximately 30 minutes, while teacher assessments will take about 10 minutes per child (who consents to participate).

Intervention Type
Other

Primary outcome(s)
The study takes place in schools with children and so the assessment schedule may need to be adapted to fit the practical demands of the environment. Some measures may need to move from the full assessments to follow-up assessments, for example. Some measures may be dropped and new measures may be introduced in response to new knowledge, new sub-studies or changes to the factors of interest. All changes to the measures will be reviewed and approved by the ethics committee.

Added 06/09/2024: The following is the list of measures as completed at the baseline of the study.

Psychological, social factors and resources available to children, resilience and mental health, and cognitive tasks measured at baseline and then approximately annually in the first assessment battery of the year (over up to three sessions) by self-report (full assessment):
1. Emotional and psychological wellbeing assessed by the Stirling Children’s Well-being Scale (SCWBS).
2. Feelings of loneliness and isolation measured by the University of California Los Angeles (UCLA) Loneliness scale
3. Symptoms of anxiety, obsessive-compulsiveness, and major depression measured by the Revised Child Anxiety and Depression Scale (RCADS)
4. Screen for post-traumatic stress symptoms measured by The Children’s Revised Impact of Event Scale (CRIES)
5. Stress levels measured by the Body Mapping protocol
6. Resilience as measured by the Connor-Davidson Resilience Scale (CD-RISC 10)
7. Resilience as measured by the Revised Child and Youth Resilience Measure (CYRM-R)
8. Overall level of life satisfaction among children as measured by the Student Life Satisfaction Scale (SLSS)
9. Emotional regulation and cognitive coping strategies as measured by the Short version of The Cognitive Emotion Regulation Questionnaire (CERQ-k)
10. Social Connectedness as measured by the Social Connectedness Questionnaire
11. Ability on social reasoning and recognising transgression measured by The Advanced Theory of Mind (AToM) battery
12. Understanding about participants’ engagement with leisurely activities, hobbies, and exercise as measured by The Children’s Leisure Activities Study Survey (CLASS)
13. Children ‘s connections to God or higher power as well as their relationship with religious

practices as measured by The Youth Spirituality Scale (YSS)
14. Children's tendencies to select negative over benign interpretations of ambiguous situations measured by the Ambiguous Story Paradigm
15. Capacity to imagine past and future positive and negative events in detail, measured by the Adapted Prospective Imagery Task (PIT)
16. Sensitivity to social threats measured by the Self-Esteem Matrix Task
17. How often children experience and feel pain, measured by the Somatic Complaints List (SCL)
18. Threat biases in patterns of attention measured by the Emotional Flanker Task
19. The size of the children's social network, and more detail about their relationships, measured by the Five Field Map
20. General self-worth and self-competence in the domain of academic skills as measured by the Self-Perception Profile for Children (SPPC)
21. Personality traits, underpinned by the Big 5 Personality Traits theory as measured by the Pictorial Personality Traits Questionnaire for Children (PPTQ-C)
22. Approach and avoidance of emotional faces (angry vs happy) as measured by the approach-avoidance task (AAT)
23. Optimism and pessimism as measured by the Youth Life Orientation Test (YLOT)
24. Interpretations of ambiguous sentences as measured by the Scrambled Sentences Task (SST)
25. Reward dominance in children as measured by the Door Opening Task (Daugherty & Quay, 1991)
26. Emotional vocabulary as measured by a Words for Feelings questionnaire
27. Stress levels measured by the Body Mapping protocol

Measures of resilience and mental health repeated in the children every 6 months (follow-up assessments) - Updated 06/09/2024: repeated at least annually:
1. Emotional and psychological wellbeing assessed by the Stirling Children's Well-being Scale (SCWBS)
2. Feelings of loneliness and isolation measured by the University of California Los Angeles (UCLA) Loneliness scale
3. Symptoms of anxiety, obsessive-compulsiveness, and major depression measured by the Revised Child Anxiety and Depression Scale (RCADS)
4. Screen for post-traumatic stress symptoms measured by The Children's Revised Impact of Event Scale (CRIES)
5. Resilience as measured by the Connor-Davidson Resilience Scale (CD-RISC 10)
6. Resilience as measured by the Revised Child and Youth Resilience Measure (CYRM-R)
7. Overall level of life satisfaction among children as measured by the Student Life Satisfaction Scale (SLSS)
8. How often children experience and feel pain as measured by the Somatic Complaints List (SCL)
9. General self-worth and self-competence in the domain of academic skills as measured by the Self-Perception Profile for Children (SPPC)

Teachers questionnaires (baseline and annually, at the time of the full assessment):
1. Teacher's report on students' emotional symptoms, conduct problems, hyperactivity /inattention, peer relationship problems, and prosocial behaviour measured by the Strengths and Difficulties Questionnaire (SDQ)
2. Resources available to students that are provided by the school for mental health support including creative arts therapies measured using the adapted Questionnaire about school resources for mental health support

Parents/carers questionnaires (Baseline and annually, at the time of the full assessment):
1. Child and family demographics measured by questionnaire equivalent of the paediatric screener PHQ and CHU9D

2. Parent's report on child's emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behaviour measured by the Strengths and Difficulties Questionnaire (SDQ)
3. Information about children and adults' attendance at a wide variety of arts events, museums, galleries, libraries and heritage sites as measured by the Arts Council Questionnaire "The Taking Part Survey" (United Kingdom Government, 2022)
4. Significant life events experienced by the child as measured by the Children's Life Events Inventory
5. parenting styles as measured by the short version of the Parenting Styles and Dimensions Questionnaire (PSDQ)
6. Child's social media usage as measured by questionnaire
7, Eating disorder psychopathology as measured by parent report on the child version of the Eating Disorder Examination (ChEDE-Q)

Key secondary outcome(s))

1. Recruitment, retention and completed visits will be collected to explore the feasibility of developing a longitudinal cohort study of preadolescent children in East London:
1.1. Recruitment will be the number of students recruited onto the study at baseline
1.2. Retention will be the number of students retained in the cohort at each visit
1.3. Completion will be measured as the number of sessions completed as planned for each round of measures

Completion date

31/12/2026

Eligibility

Key inclusion criteria

In order to be enrolled in the study, parental consent will be sought, and children must be:
1. Attending a primary school in East London
2. Between the ages of 7 and 11 years (at recruitment)
3. Able to understand spoken English
4. Be willing and able to provide assent

Participant type(s)

Healthy volunteer

Healthy volunteers allowed

No

Age group

Child

Lower age limit

7 years

Upper age limit

12 years

Sex

All

Total final enrolment
873

Key exclusion criteria
To participate in the present study, children must not be diagnosed with an Intellectual Disability Disorder

Date of first enrolment
06/10/2022

Date of final enrolment
08/12/2023

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Youth Resilience Unit
Academic Centre
Newham Centre for Mental Health
Cherry Tree Way
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Sponsor information

Organisation
Queen Mary University of London

ROR
https://ror.org/026zzn846

Funder(s)

Funder type
Charity

Funder Name
Barts Charity

Alternative Name(s)

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
After the publication of the main findings, the researchers will operate an open data policy, following the FAIR principles e.g. Findable, Accessible, Interoperable and Reusable. The anonymised datasets generated during and/or analysed during the current study are available from the Principal Investigator on reasonable request: Jennifer Lau (j.lau@qmul.ac.uk).
During the course of the study, data will be shared internally within the study using an online data collection platform called Qualtrics. The method for sharing the data externally (if required) will be decided in due course.
Assent from the children and Informed Consent from the parents/guardians will be obtained from all participants involved in the study. All participants are assigned a patient ID at the point of enrolment and all subsequent data collected will be linked to this ID, without any link to identification data following Good Clinical Practice.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		08/07/2025	16/07/2025	Yes	No