



Education
Endowment
Foundation

Emotion Coaching

Further appendices

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Ekaterina Stoilova, Thea Schei

 **National Centre
for Social Research**

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Evaluation of the Emotion Coaching programme

Memorandum of Understanding

This memorandum of understanding (MoU) explains what your setting's participation in this study will involve. Please read it carefully. If you agree to take part, have engaged in a one-to-one meeting with Emotion Coaching UK (ECUK) about the programme and accept the terms and conditions outlined below, please initial each section, sign a copy of this form and return it by email to the contact provided at the end of this letter.

The details of the member of staff signing the MoU (name and work email) will be shared with the Education Endowment Foundation (EEF). Please see the EEF's privacy notice for more information on how EEF processes and uses your data: <https://educationendowmentfoundation.org.uk/privacy-notice>

Overview

Emotion Coaching

Emotion Coaching is an approach that fosters teachers' and early years practitioners' warm and responsive relationships with children through self-regulation and co-regulation of both children and adults. Emotion Coaching UK (ECUK) developed this professional development training programme and will support its delivery in early years settings in England. ECUK will deliver the programme in partnership with Norland College. The programme delivery will run from November 2024 to May 2025.

Independent evaluation

All settings taking part in the Emotion Coaching training programme will also participate in the evaluation by a research team at the National Centre for Social Research (NatCen).

NatCen's evaluation is a randomised control trial. A randomised control trial is a study in which research participants are divided into two groups – the intervention group and the comparison group. Intervention groups receive the Emotion Coaching training programme, comparison groups do not receive it. The division is random, that is, it is by chance. By comparing the results for both groups at the end, the research team can see if the training programme has an impact or not.

NatCen will assess the impact of Emotion Coaching by measuring whether it leads to an improvement in children's self-regulation. This will be done by carrying out surveys with practitioners and parents/carers at the settings. Additionally, observation-based assessments will be carried out with children in a small proportion of settings. Independent practitioners, working for AlphaPlus (a private education agency), will visit settings to conduct these assessments with children at the end of the school year.

The evaluation was reviewed by and received ethical approval from NatCen's Research Ethics Committee on 1st December 2023.

NatCen's evaluation will also include other research activities, such as interviews. More details of these and other activities can be found in the table below.

Timing	Evaluation activity
Jan – Aug 2024	Nurseries sign up to the programme
Sep 2024	Settings share pupil and staff details with NatCen Practitioner online survey (all settings)
Oct 2024	Settings are randomised
Nov 2024	Emotion Coaching 2-day training Staff telephone interviews (x8)
Dec 2024 – Jan 2025	Emotion Coaching online workshops (x3)
June – July 2025	Practitioner online survey (all settings) Practitioners complete questionnaires about children (all settings) Parent questionnaires (all settings)

	Staff telephone interviews (x20) Observational assessments (about 10% of settings)
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I confirm that I have read and understood the Overview section (initial the box).

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Responsibilities

Responsibilities of the grantee (ECUK and Norland College)

- ECUK will recruit settings and help them select 2-4 eligible practitioners to take part.
- ECUK and Norland College will deliver the Emotion Coaching training workshops.
- The ECUK Programme Manager will support practitioners with their queries throughout the programme.
- Norland College will administer payments to settings (both comparison and intervention groups), including payments for releasing staff for training and incentives.

Responsibilities of the independent evaluator (NatCen)

- NatCen will be responsible for data protection and ethics on this project.
- NatCen will collect background and survey data on children and practitioners.
- NatCen will randomly allocate settings to the intervention group or comparison group.
- NatCen will invite practitioners and parents/carers (through practitioners) to take part in research activities.
- NatCen will administer gift vouchers to practitioners and parents/carers as tokens of appreciation for their participation in research activities.
- NatCen will contract AlphaPlus to conduct observation-based assessments with children in a small proportion of settings.
- NatCen will analyse the results and prepare an evaluation report, which will be published by EEF.
- NatCen will prepare data from the evaluation for archiving with the EEF data archive and for linking with Early Years Foundation Stage Profile data from the National Pupil Database.

Responsibilities of all settings

- In September 2024, settings will inform parents or carers about the EC training programme and evaluation by sharing an information letter with an opt-out form.
- In September 2024, settings will share with NatCen the selected children's first and last name, date of birth, home postcode, sex, Unique Pupil Number where available, eligibility for Early Years Pupil Premium funding and the number of hours per week that the child attends the setting for. Settings will also share with NatCen names and contact details of staff members eligible to take part in the Emotion Coaching evaluation, including a member of the senior leadership team and all other staff members who work directly with 3-4 year old children at the setting.
- The evaluation runs over one school year. Setting staff selected to take part in the evaluation will complete online surveys in September 2024 and in June-July 2025. A staff member working with 3-4 year olds will also complete paper questionnaires about children's behaviour. Practitioners will receive a £50 voucher for completing these paper questionnaires (one voucher per setting sent in the post).
- Settings will distribute questionnaires to parents or carers of the selected children in June-July 2025 and will return completed questionnaires back to NatCen. Parents or carers who take part in this survey will receive a £10 e-voucher as a thank you, which will be emailed to them directly.
- A small proportion of settings will take part in observation-based assessments, which will be conducted by independent practitioners working for AlphaPlus in June-July 2025.
- If selected for the observation-based assessments, settings will find a time and a suitable, quiet space for an independent practitioner to administer assessments with the 3-4-year-old children (in June-July 2025). The assessments will measure children's self-regulation.
- Participation in all surveys and interviews is voluntary.

Responsibilities of settings in the comparison group

- There will be no change to normal early learning and care practices.
- Comparison group settings will receive £1400 for supporting evaluation activities, split into two payments: £400 after data collection in September-October 2024 and £1000 after data collection in June-July 2025.

Responsibilities of settings in the intervention group

- Settings in the intervention group will allocate 2-4 named early years practitioners to the project to work with ECUK. This could be a teacher, a teaching assistant, an early years educator or another staff member working directly with 3-4-year old children. At least one of the staff members selected must be in a senior leadership team position (e.g. nursery manager in a PVI setting or a headteacher or head of early years in a primary school). The selected practitioners should have sufficient capacity to be able to engage with the programme, respond promptly to requests and facilitate requirements as appropriate. If they leave the setting or are no longer able to meet the requirements for the role, ECUK must be informed of this, and details of a replacement contact provided as soon as possible.
- Practitioners being trained in EC will attend a two-day online training event and complete three two-hour online training sessions as a part of their training.
- Settings will receive funding to support this delivery, aimed at providing £7.50 per hour per person of backfill costs for staff release.
- The ECUK team will arrange a phone call with settings in March-April 2025 to discuss practice, implementation and support for ECUK accreditation, if desired.
- Intervention group settings will receive £400 for supporting evaluation activities, split into two payments: £150 after data collection in September-October 2024 and £250 after data collection in June-July 2025.
- NatCen researchers will observe the 2-day online ECUK training as well as the three 2-hour online training sessions. If the training being observed is attended by your setting, NatCen will liaise with you to inform you about this.
- Some practitioners will also be invited to take part in an interview with a NatCen researcher at the beginning of the programme and at the end.

I confirm that I have read and understood the section on Responsibilities.

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Data protection

NatCen is the data controller and data processor for this study. This means that they are responsible for deciding the purpose and legal basis for processing data. NatCen's legal basis for processing the data is 'legitimate interest'. You can read more about their approach to data protection in their privacy notice: natcen.ac.uk/EmotionCoaching-Privacy

NatCen will have access to information on settings or schools, practitioners, children, and parents taking part in the Emotion Coaching training programme.

For children, NatCen will collect their first name, last name, sex, date of birth, home postcode, Unique Pupil Number (UPN) where available, the number of hours the child attends the setting per week, and their eligibility for Early Years Pupil Premium. This data will be securely transferred by early years settings and schools to the NatCen research team.

For practitioners, NatCen will collect their full names and contact details as well as those of the setting manager or headteacher/head of early years. The delivery teams (ECUK and Norland College) will collect details from settings and share them with NatCen through a secure server. In signing this MoU, settings agree for ECUK and Norland College to share names and email addresses of staff with NatCen.

During the evaluation, NatCen will also process:

1. recordings, transcripts, and survey data from parents/carers and practitioners;
2. child assessment data collected by independent practitioners during the observational assessments
3. data collected about practitioners during training including attendance, content covered and engagement

The information collected as part of this evaluation will be used for research purposes only. NatCen will store and handle all data securely and confidentially in line with UK GDPR. All personal information will be securely deleted within twelve months of the project's completion, by July 2028.

The evaluation is funded by the Education Endowment Foundation (EEF). Data collected as part of all EEF evaluations are archived for research purposes. The EEF are the data controller for the data archive which is managed by FFT Education as a data processor working on EEF's behalf. At the end of the evaluation, NatCen will submit data from the evaluation directly to FFT through a secure portal. Please see the EEF's privacy notice for more information on how EEF processes and uses your data:

<https://educationendowmentfoundation.org.uk/privacy-notice>

In the future, researchers might link the data in the EEF's data archive to information held in the Department for Education's (DfE) National Pupil Database and other datasets. To do so, FFT Education would use the direct identifiers of children (like names, dates of birth) to request Pupil Matching References (PMR) from the DfE, who would transfer PMRs directly to the Office for National Statistics' Secure Research Service (SRS). FFT Education would use the SRS to match the data from the evaluation with the PMRs. This process ensures that future researchers will be able to link data from the evaluation to the National Pupil Database and other datasets without accessing direct identifiers of the children.

I confirm that I have read and understood the section on Data protection.

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Agreement

I agree with the conditions stated in this Memorandum of Understanding.

☐

My setting/school will take part in the Emotion Coaching programme and NatCen's independent evaluation.

☐

I understand that our participation in the programme and the evaluation is voluntary and that we can withdraw at any time, without giving any reason.

☐

Name: _____

Job role: _____

Setting or school name: _____

Phone number: _____

Email address: _____

Signature: _____

Date: _____

Please email completed copies to **EY.EEF.ECUK@gmail.com**. You can either sign by hand and scan the document or do so electronically by typing your signature.

If you have any questions about how to fill in and return this MoU, please contact ECUK at **EY.EEF.ECUK@gmail.com**.

If you have any questions or concerns about NatCen's evaluation, please contact the research team at **EmotionCoaching@natcen.ac.uk** or by calling 0808 281 9513.

Evaluation of Emotion Coaching

Information sheet for nurseries

As part of the **Department for Education's Early Years Recovery Programme**, the East of England Early Years Stronger Practice Hub, Early Years South West Stronger Practice Hub, Northern Lights Early Years Stronger Practice Hub, Yorkshire and Humber Together Early Years Stronger Practice Hub, Kent Early Years Stronger Practice Hub, Derbyshire and Nottinghamshire Early Years Stronger Practice Hub, Thames Valley Early Years Stronger Practice Hub, St Edmund's Early Years Stronger Practice Hub for Yorkshire and The Humber and the Education Endowment Foundation (EEF) are working together to fund early years settings' access to evidence-informed programmes and study the programme's influence on practice and children's outcomes. This initiative aims to support education recovery following the pandemic, whilst also developing our understanding of effective professional development in the early years.

The National Centre for Social Research (NatCen) will carry out an independent evaluation of the Emotion Coaching (EC) training programme, which is being run in your area by Emotion Coaching UK (**ECUK**). This training programme is designed to help nursery workers support young children's personal, social and emotional development, including self-regulation. ECUK will deliver the programme in partnership with Norland College.

This information sheet provides further detail on the purpose of our evaluation and its research activities.

What is Emotion Coaching (EC)?

Originally developed as a parenting programme in the US, Emotion Coaching (EC) has since been adapted for use in educational settings and is delivered both independently and integrated within larger interventions. EC has been implemented across a range of settings in the UK and has shown evidence of promise.

EC is an approach that fosters teachers' and early years practitioners' warm and responsive relationships with children through self-regulation and co-regulation of both children and adults. EC supports children to understand the different emotions they experience, why they occur and how to handle them.

This professional development programme will involve 2-4 staff members (including one member of the senior leadership team) per nursery setting. The staff members involved in the training should be working with 3-4-year olds at the nursery. The training will involve 5 training sessions:

- A 2-day online training workshop in November 2024
- 3 x 2-hour online workshop sessions, held two weeks apart, in December 2024/January 2025
- An optional 45-minute online ECUK practice accreditation discussion per setting with ECUK in March/April 2025.

Practitioners who attend the training will be encouraged to share their learning with other staff members.

All staff working with 3-4-year olds will be encouraged to use EC in the nursery as part of their everyday interactions with children.

What does the evaluation want to find out?

Our evaluation wants to find out whether the EC training programme for staff has an impact on children's self-regulation. We will do this by comparing children in settings where staff received training in EC with children in settings that did not receive the training. Data will be collected from nursery staff members and parents/carers.

What does the evaluation involve?

The evaluation will run from September 2024 to July 2025. The evaluation will be a randomised control trial. This means that staff at half of the nurseries taking part in the evaluation will attend the ECUK training programme and staff at the other nurseries will carry on with their normal teaching and childcare. Random allocation ensures there is a fair process to decide which nurseries receive the programme and which receive

the incentive. Additionally, using randomly assigned groups is the best way of evaluating if a programme has an impact on children's outcomes, as the two groups can be assumed to be the same, therefore any differences in outcomes can be attributed to the programme.

At the end of the evaluation, NatCen will compare children's personal, social and emotional development across nurseries that do and do not take part in the programme, to see if there is any difference.

NatCen will inform settings about their allocation to intervention group or comparison group in October 2024.

NatCen's evaluation will involve other research activities, such as interviews and surveys with nursery practitioners. NatCen will also ask practitioners to distribute questionnaires to parents or carers at the end of the programme. Additionally, a small proportion of settings will be invited to take part in observational assessments that will be carried out with the children by independent practitioners. NatCen will provide further information about these activities in the autumn of 2024.

Who can take part?

Private, Voluntary and Independent (PVI) settings, maintained nursery schools as well as nursery classes in primary schools are all eligible.

Settings must have a minimum of 17 children aged 3 years old or older enrolled in September 2024 in order to take part in the study. These children must be enrolled to attend the nursery for at least 10 hours per week.

Settings that have signed up for another Stronger Practice Hub (SPH) funded programme that will be delivered in the 2024-2025 academic year are not eligible to take part, including settings that have been allocated to the comparison group for one of the other SPH trials (Early Talk Boost, One Programme, EYCP, Concept Cat, CFS).

Settings cannot take part if participating in another EEF funded evaluation in the early years or if they are participating in the **DfE Early Years Professional Development Programme** during the year of evaluation delivery (2024/25).

Additionally, settings cannot take part if they have already been involved in EC training within the last academic year (2023-2024).

Does it cost anything?

Normally, attending EC training costs £400 per person, but for settings taking part in the evaluation, participation is free. As a thank you payment for participating in the evaluation, the nurseries that will be randomised to take part in the programme will receive £400 in total, split into two payments. In recognition that there are costs associated with undertaking and implementing professional development, additional funding has been made available by the EEF to reimburse nurseries receiving the programme for approximately 50% of their staff's time/cover cost to attend training. Settings that receive the programme training will be provided with £7.50 per hour per person of backfill costs for staff release.

The nurseries that are randomised to the comparison group will receive £1400 in total, also in two payments, as a thank you for their participation in the research project.

Additionally, settings in both intervention and comparison groups will receive a £50 voucher for completing paper questionnaires about children's behaviour. Parents or carers who complete the parent questionnaire will receive a £10 e-voucher sent to them directly by email.

What are the potential benefits for my setting?

If your setting is allocated to the intervention group, 2-4 practitioners will be able to attend the Emotion Coaching training workshops. We anticipate positive outcomes for practitioners and children from the training. For example, we expect that by the end of the programme, practitioners will be more confident in supporting the children in their nurseries with their self-regulation.

If your setting is allocated to the comparison group, you will be supporting really important research into children's personal, social and emotional development, which will benefit practitioners and children in the future. Settings in the comparison group will also have the opportunity to sign up for Emotion Coaching training

once the final evaluation data has been collected, using their thank you payment for taking part in the evaluation.

Evaluation timeline

Timing	Evaluation activity
Jan – Aug 2024	Nurseries sign up to the programme
Sep 2024	Settings share pupil and staff details with NatCen Practitioner online survey (all)
Oct 2024	Settings are randomised
Nov 2024	Emotion Coaching 2-day online training Staff telephone interviews (x8)
Dec 2024 – Jan 2025	Emotion Coaching online workshops (x3)
June – July 2025	Practitioner online survey (all) Practitioners complete questionnaires about children (all) Parent questionnaires (all) Staff telephone interviews (x20) Observational assessments (about 10% of settings)

How will our data be used?

All data will be treated with the strictest confidence – your nursery, staff and the children you look after will not be identified in any report arising from the research.

NatCen is the data controller and data processor for this evaluation. Our legal basis for the evaluation is “legitimate interest”. More information can be found in our privacy notice, which you can find online at: natcen.ac.uk/EmotionCoaching

What next?

If you are happy to take part, please carefully read and sign the Memorandum of Understanding (MoU) and book an MoU signing meeting with the Recruitment Team at ECUK as soon as possible. NatCen will then be in touch closer to September 2024 to share more information about the evaluation and collect details.

Who do I contact for more information?

If you have any questions relating to the evaluation, please contact the NatCen research team at EmotionCoaching@natcen.ac.uk or on 0808 281 9513.

If you have any questions about Emotion Coaching or the training programme, please contact EY.EEF.ECUK@gmail.com

You can find out more about:

- ECUK at <https://www.emotioncoachinguk.com/ey-emotion-coaching-project>
- Norland College at <https://www.norland.ac.uk/>
- NatCen at natcen.ac.uk/EmotionCoaching
- EEF at <http://www.educationendowmentfoundation.org.uk>

Evaluation of Emotion Coaching

Information sheet for parents

Dear parent/carers,

RE: Independent evaluation of the Emotion Coaching programme

We are writing to let you know that your child's nursery is participating in an exciting research study about children's personal, social and emotional development.

Nurseries across England will engage in a training programme called Emotion Coaching (EC). This training programme is designed to help nursery workers support young children's emotions, behaviour and their relationships with other children and adults, including self-regulation. Emotion Coaching UK (ECUK), in partnership with Norland College, will support the delivery of the training programme in early years settings and schools in different regions of England. The training programme will run from November 2024 to May 2025.

The programme will be evaluated in a research study carried out by the National Centre for Social Research (NatCen). The evaluation will look at whether the Emotion Coaching training programme has an impact on children's self-regulation and other outcomes. In order to do this, half of the nurseries taking part in the study will participate in the Emotion Coaching training programme and the other half will be in the comparison group. Your child's nursery has been selected to take part in this study. This study is being funded as part of the **Department for Education's Early Years Recovery Programme** in collaboration with Stronger Practice Hubs (SPH) and the Education Endowment Foundation (EEF).

What is Emotion Coaching (EC)?

- The Emotion Coaching training programme is a professional development programme that was developed by ECUK.
- Emotion Coaching is an approach that helps teachers and early years staff to better support children in understanding the different emotions they experience, why they occur and how to handle them.
- Nominated teachers and early years staff will take part in a 2-day online training and three follow-up workshops.
- Trained staff will be encouraged to share their learning with other staff members at their nursery.
- All staff working with 3-4 year olds will be encouraged to use Emotion Coaching in the nursery as part of their everyday interactions with children
- Emotion Coaching will take place this school year.

What does the evaluation involve for my child's nursery and my child?

- The evaluation is a randomised control trial. This means that some nurseries will take part in Emotion Coaching training, and others will not. By looking at the results for both groups at the end, we can see if the Emotion Coaching training programme has an impact on the practitioners and children in the nurseries..
- Staff in all nurseries will be asked to complete questionnaires about 3-4 year old children at the nursery in June-July 2025. These questionnaires will ask about the child's emotions, behaviour and their relationships with other children and adults at the nursery. Staff will also be asked to provide personal details about the children including their first name, last name, sex, date of birth, home postcode, Unique Pupil Number if available, eligibility for Early Years Pupil Premium and the number of hours the child attends the setting per week.
- Staff members will be invited to complete surveys about the way they work with children, and some staff will be asked to participate in telephone interviews, although those will not be about individual children.
- A small proportion of nurseries will be invited to take part in observation-based assessments. Independent practitioners will visit the selected nurseries in June-July 2025 and carry out short 10-15-minute activities with the child.

- NatCen will link the data that we collect to the Early Years Foundation Stage Profile (EYFSP) data from the National Pupil Database.

What will taking part in the evaluation involve for me?

- You will be invited to complete one short paper questionnaire at the end of the programme in June-July 2025.
- The questionnaire will ask about your child's behaviour and emotions at home.
- Only one parent or carer per family will be invited to take part in this survey.
- Nursery staff will share the questionnaire with you in June-July 2025.
- You will be offered a £10 gift e-voucher for completing the survey, to be sent to you via email.
- Participation is voluntary.

How will my child's data be used?

During the study

If you agree for your child to take part in the study, NatCen will keep a record of your responses to the surveys and your child's assessment scores. Looking at these responses and scores will help the research team understand the impact of the Emotion Coaching programme. NatCen will not share this information with anyone, not even your child's nursery.

At NatCen, all data will be stored on a secure server. Access to information relating to your child will be restricted to those individuals working on this evaluation.

Longer-term child outcomes will be analysed by linking data collected as a part of the evaluation to the Early Years Foundation Stage Profile (EYFSP) data from the National Pupil Database. The process of linking NPD data is detailed in the next section.

After the study

NatCen will only use information they collect for the purpose of this evaluation and will delete all personal data from NatCen systems after the results have been published. Names of children, parents/carers or nurseries will not be used in any report about this research.

The evaluation is funded by the EEF. Data will be shared with the Department for Education (DfE) in order that it can be linked to the National Pupil Database (NPD). To do this, NatCen will send DfE children's personal data collected from education settings, including first name, surname, date of birth, home postcode, UPN and school identifiers like URN and LAESTAB.

Impact evaluation data collected as part of all EEF evaluations are archived for research purposes and the EEF will be the data controller of the archived data. At the end of evaluation, NatCen will prepare data so that it can be archived in the Office for National Statistics' Secure Research Service (SRS), which will be managed by **FFT Education** on behalf of the EEF. The SRS team will then transfer files from the project space to the FFT space within the SRS.

The archived data will not contain direct identifiers like child name, contact details and date of birth, but does hold a Pupil Matching Reference (PMR). PMR is a meaningless identifier that will enable potential further matching to the NPD and other administrative datasets without accessing direct identifiers of the child. Once the archiving process is completed, the archive will be open to the research community for analysis within the SRS. The archived data will be potentially shared with other parties, relinked to the NPD, and/or linked to other datasets. For further information, see the **EEF's archive privacy notice**.

You can read more about how your and your child's data will be used in NatCen's Privacy Notice: natcen.ac.uk/EmotionCoaching-Privacy

What next?

If you are happy for your child to take part, you do not need to do anything.

If you **do not** want your child to take part in NatCen's evaluation of the Emotion Coaching training programme, please let your child's nursery know as soon as possible by signing the form below and returning it to the person who gave you this letter. Your child's information will not be shared with NatCen and your child will not take part in any assessments. You can withdraw your child from the evaluation at any point before the data analysis process is started.

How can I get more information?

If you would like more information about the evaluation of Emotion Coaching, please contact NatCen by email at **EmotionCoaching@natcen.ac.uk** or by calling 0808 281 9513. You can also find out more at **natcen.ac.uk/EmotionCoaching**.

Tick the box below and fill in the details to confirm you **do not** want your child to take part in the evaluation of the Emotion Coaching training programme.

☐

Signature: _____

Name: _____

Name of your child: _____

Date: _____

Appendix E: Primary and secondary outcome questionnaire measures



Emotion Coaching research project Child questionnaire for settings

Instructions:

1. Please complete this questionnaire about the child who is named in the box below.
2. This questionnaire should be filled in by a practitioner who has knowledge of the named child and has worked with them in the last year.
3. Please complete this questionnaire using BLACK OR BLUE INK. The questionnaire will be read by a scanner, so please mark your answers by putting a cross  in the appropriate boxes.
4. If you are not able to complete this questionnaire, please let us know about the reason below and return the incomplete questionnaire to us.
5. Please ensure all questionnaires (complete and incomplete) are returned to us as soon as possible.
6. If you need any help, please call the research team on **0808 281 9513** or email **emotioncoaching@natcen.ac.uk**

Please answer this questionnaire about: <ChName>

Their ID is: <PupilSerial><CKL>

Setting Name: <Setting Name>

Setting ID: <SettingID><CKLS>

<barcode>

- 1** If you are returning this questionnaire not completed, please select the reason for this by putting a cross  in the appropriate box:

- ☐ Child no longer attends the setting
- ☐ Child has been long term absent/off sick
- ☐ Parents/carers withdrew their child from the study
- ☐

Safeguarding concerns

2

Is the child eligible for early years pupil premium (EYPP)? *Please check this with your setting management if you are unsure.*

☐

Yes

☐

No

3

The following questions are about the child's self-regulation. Please select the answer that best fits what the child is like.

Please cross ☒ **X** one box on each line.

	Never true	Rarely true	Occasionally true	Often true	Always true
a. Is calm and easy going	☐	☐	☐	☐	☐
b. Persists with difficult tasks	☐	☐	☐	☐	☐
c. Chooses activities on their own	☐	☐	☐	☐	☐
d. Is regularly unable to sustain attention	☐	☐	☐	☐	☐
e. Does not need much help with tasks	☐	☐	☐	☐	☐
f. Gets over being upset quickly	☐	☐	☐	☐	☐
g. Is easily upset over small events	☐	☐	☐	☐	☐
h. Persists with tasks until completed	☐	☐	☐	☐	☐
i. Waits their turn in activities	☐	☐	☐	☐	☐
j. Gets over-excited	☐	☐	☐	☐	☐
k. Is good at following instructions	☐	☐	☐	☐	☐
l. Likes to work things out for self	☐	☐	☐	☐	☐
m. Is happy to share	☐	☐	☐	☐	☐
n. Most days will lose temper	☐	☐	☐	☐	☐
o. Helps others	☐	☐	☐	☐	☐
p. Shows wide mood swings	☐	☐	☐	☐	☐
q. Plays easily with other children	☐	☐	☐	☐	☐
r. Is not able to sit still when necessary	☐	☐	☐	☐	☐
s. Is co-operative	☐	☐	☐	☐	☐
t. Is impulsive	☐	☐	☐	☐	☐

Emotion Coaching research project

Child questionnaire for parents/carers

Over the last few months, your child's setting has been participating in an exciting research study about children's personal, social and emotional development called

Emotion Coaching

As a part of this study, we want to ask you to fill in a questionnaire about your child's behaviour and emotions at home.

If you complete this questionnaire and provide us with your email address, we will email you a £10 Love2Shop gift e-voucher as a thank you. All e-vouchers will be sent out in August 2025.

Instructions:

1. Please complete this questionnaire using BLACK OR BLUE INK. The questionnaire will be read by a scanner, so please mark your answers by putting a cross  in the appropriate boxes.
2. Please return your questionnaire to your setting as soon as possible.
3. If you need any help, please call the research team on **0808 281 9513** or email **emotioncoaching@natcen.ac.uk**

Please answer this questionnaire about: <ChName>

Their ID is: <PupilSerial><CKL>

Setting Name: <Setting Name>

Setting ID: <SettingID><CKLS>

<barcode>

[illegible]

2

X

1 P18385 EC Parent carer questionnaire v1

B. Professional Emotion Coaching Questionnaire (ask all)

TS2 : [SET TIME STAMP HERE]

{ASK if Elig1=1 or 2}

PECQIntro1

The next section of the questionnaire is about emotions. We are going to ask about two emotions - sadness and anger. There are no right or wrong answers. Some of the questions may appear repetitive, but they are addressing different aspects of your emotional responses, so please answer all questions.

PECQ1

"A child's sadness is important". Please choose one answer that best describes how much you agree or disagree with this statement.

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree

PECQ2

"I think anger is an emotion worth exploring with the child".

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree

[continue the same format for PECQ3-PECQ9]

PECQ3	Sadness is something that a child needs to get over, not dwell on
PECQ4	Children have very little to be angry about
PECQ5	When a child is angry, I just want him/ her to stop feeling angry
PECQ6	I think that a child's sadness can sometimes be an overreaction
PECQ7	Anger is something that a child needs to get over, not dwell on
PECQ8	Children have a right to feel angry
PECQ9	A child's anger is important

PECQIntro2

In the next questions, we are interested in how often you react in certain ways when children at your setting are sad or angry.

PECQ10

"When a child is angry, I try to be understanding of his/her mood". Please choose one answer that best describes your response.

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

PECQ11

“When a child is sad, I just want him/her to stop feeling sad”.

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

[continue the same format for PECQ12-PECQ39]

PECQ12	When a child is angry, I take some time to try to experience this feeling with the child
PECQ13	When a child is sad, I try to be understanding of his / her mood
PECQ14	When a child is sad, I ignore it as it will probably take care of itself
PECQ15	When a child is sad, I show him / her that I understand
PECQ16	When a child is angry, I try to solve the problem that caused the anger
PECQ17	I comfort a child when he / she is sad
PECQ18	I make a point to identify and share emotions with a child when he / she is feeling angry
PECQ19	When a child is sad, I try to distract him/ her from their sadness
PECQ20	When a child is sad, I help him/ her to sort out the problem causing the sadness
PECQ21	When a child is sad, I take some time to try to experience this feeling with the child
PECQ22	When a child is angry, I show him / her that I understand
PECQ23	When a child is sad, I help him / her to identify / name the feeling
PECQ24	I comfort a child when he / she is angry
PECQ25	When a child is sad, I try to help him / her explore what is making him / her sad
PECQ26	When a child is angry, I take time to talk to him/her about his / her feelings
PECQ27	When a child is sad, I try to change his / her mood into a cheerful one
PECQ28	When a child is sad, I help him / her to come up with his / her own ideas on how to get through it
PECQ29	When a child is angry, I help him / her to identify / name the feeling
PECQ30	When a child is sad, I try to solve the problem that caused the sadness
PECQ31	When a child is angry, I try to distract him/ her from his/ her anger
PECQ32	I make a point to identify and share emotions with a child when he / she is feeling sad
PECQ33	When a child is angry, I try to change his / her mood into a cheerful one
PECQ34	When a child is sad, I take time to talk to him/ her about his / her feelings
PECQ35	When a child is angry, I help him / her to come up with his / her own ideas on how to get through it
PECQ36	When a child is angry, I ignore it as it will probably take care of itself
PECQ37	When a child is angry, I try to help him / her explore what is making him / her angry
PECQ38	When a child is sad, I try to get him/ her over the sadness quickly and move on
PECQ39	When a child is angry, I help him / her to sort out the problem causing the anger

Preschool Situational Self-Regulation Toolkit (PRSIST) Assessment

Child ID number:

ACTIVITY 1: MEMORY CARD GAME

Child initials: (Please do NOT enter child name)

For each item, please rate the degree to which the child engages in the described behaviour in the activity (circle one rating for each item):

1.	Did the child sustain <i>attention</i> , and resist <i>distraction</i> , throughout the instructions and activity?	1	2	3	4	5	6	7
	This item focuses on the child paying attention throughout the activity: during the facilitator's instructions, during their turn and during others' turns. Internal or external occurrences, sounds or objects rarely distract their attention. To rate this item, you have to pay attention to where children are looking throughout the game or activity. <i>At a score of 1</i> , a child pays virtually no attention to any aspects of the instructions or game. <i>At a score of 7</i> , a child has virtually no lapses in attention and pays careful attention at all times.							
2.	Was the child <i>engaged</i> in the activity throughout its duration?	1	2	3	4	5	6	7
	This item focuses on engagement, which is related to their involvement and investment in the activity. A child can be paying attention (as in Item 1), but showing little active investment in the activity. Behaviours such as reacting (e.g., to someone else getting a pair), responding (e.g., to words or actions of others), asking and answering questions (e.g., responding to questions of 'What do you think is in the box?'), and/or following requests (e.g., not shaking the box before permitted) would all be indicators of engagement. <i>At a score of 1</i> , a child is barely engaged in the activity. They may often look at the facilitator and aspects of the activity, but their involvement is entirely passive and reactionary (or non-existent). <i>At a score of 7</i> , a child is reacting to the things that happen in the activity, such as responding to and asking questions and following requests. They are constantly active participants for the duration of the activity.							
3.	Was the child <i>thoughtful</i> and <i>planful</i> before acting?	1	2	3	4	5	6	7
	This item focuses on the child's mental effort put toward the activity. Evidence of being thoughtful includes pauses to think and consider, revision of initial responses (e.g., revises guess of what's in the box based on new information) and not perseverating on the same mistakes (e.g., keeps flipping the same two cards). <i>At a score of 1</i> , a child is responding quickly (almost reflexively) and repeating the same mistakes in their responses or actions. <i>At a score of 7</i> , a child is taking time and effort to think, remember and avoid repeating mistakes. They may also revise initial responses (e.g., start to reach for a card but, adopting a better strategy, stops and selects another).							

4.	Was the child <i>self-directed</i> , engaging in the activity with little prompting?	1	2	3	4	5	6	7
	This item focuses on whether the child is able to internalise the sequence and requirements of the activity, and independently enact this. This includes not only knowing when it is their turn and/or what to do next, but enacting this with little to no prompting. <i>At a score of 1</i> , a child is highly other-regulated. Even if they appear to know what the next step/requirement is, they consistently require prompting and affirmation from the facilitator to do this (e.g., ‘Yes, it’s your turn’, ‘Now you can shake the box’). <i>At a score of 7</i> , after some initial time to familiarise with the activity, the child does not require reminders, prompts or affirmations to continue the activity (e.g., if a child finds a pair, they independently commence their second turn).							
5.	Did the child <i>control their behaviours</i> and stay within the rules of the activity?	1	2	3	4	5	6	7
	This item focuses on the extent to which children resist behavioural impulses. This could include skipping turns or steps (e.g., skipping the requirement to gently lift), breaking rules of the game or activity or, in more extreme cases, being physically or verbally aggressive. <i>At a score of 1</i> , a child is showing complete disregard for the rules of the game, has engaged in serious physical or verbal aggression towards others and/or is highly disruptive of the game (e.g., wiping cards off the table, immediately lifting the lid of the box). <i>At a score of 7</i> , a child remains within the rules of the activity, is calm and controlled, and has not given in to negative impulses.							
6.	Did the child <i>remain in their seat</i> and <i>rarely fidget</i> ?	1	2	3	4	5	6	7
	This item focuses on whether the child is able to remain reasonably still. Fidgeting with their hands, legs, feet, body, or leaving their chair entirely (other than briefly, to reach something required for the activity) apply to this item. <i>At a score of 1</i> , a child is almost always fidgeting and/or leaving their chair. <i>At a score of 7</i> , a child is rarely fidgeting and does not leave their chair for reasons unrelated to the activity’s requirements.							
7.	Did the child follow <i>social conventions</i> of the situation?	1	2	3	4	5	6	7
	This item focuses on whether a child adheres to the general social requirements of the situation. This includes things like waiting their turn, not beginning the activity before instructions are complete, being considerate to others (e.g., not talking over others), acknowledging others’ successes and responding to questions. <i>At a score of 1</i> , a child is consistently lacking consideration for others or is being actively inconsiderate (e.g., not waiting their turn, actively ignoring). If there are some positive and negative social behaviours, consider the frequency and gravity of these to decide a rating. <i>At a score of 7</i> , a child is consistently considerate of others’ turns and speech, is responsive to and considerate of others, and celebrates others’ successes.							

8. Did the child take opportunities to be <i>helpful</i> and <i>supportive</i> to the adult or other children? (Memory card game only)	1	2	3	4	5	6	7
This item focuses on whether, in a social situation like a group memory card game, a child takes opportunities to be helpful to others. Opportunities to help are prevalent – answering questions that are posed, helping a child that is unclear about next steps or is struggling with an action, providing honest guidance, and giving support. <i>At a score of 1</i>, a child engages in no instances of helping behaviour. <i>At a score of 7</i>, although some potential opportunities for help may be missed, a child generally and frequently offers help. For a score of 7, you should feel that the child has a general disposition toward helping, and routinely acts upon this.							

Preschool Situational Self-Regulation Toolkit (PRSIST) Assessment

Child ID number:

ACTIVITY 2: CURIOSITY BOXES

Child initials: (Please do NOT enter child name)

For each item, please rate the degree to which the child engages in the described behaviour in the activity (circle one rating for each item):

1.	Did the child sustain <i>attention</i>, and resist <i>distraction</i>, throughout the instructions and activity?	1	2	3	4	5	6	7
This item focuses on the child paying attention throughout the activity: during the facilitator's instructions, during their turn and during others' turns. Internal or external occurrences, sounds or objects rarely distract their attention. To rate this item, you have to pay attention to where children are looking throughout the game or activity. <i>At a score of 1</i>, a child pays virtually no attention to any aspects of the instructions or game. <i>At a score of 7</i>, a child has virtually no lapses in attention and pays careful attention at all times.								
2.	Was the child <i>engaged</i> in the activity throughout its duration?	1	2	3	4	5	6	7
This item focuses on engagement, which is related to their involvement and investment in the activity. A child can be paying attention (as in Item 1), but showing little active investment in the activity. Behaviours such as reacting (e.g., to someone else getting a pair), responding (e.g., to words or actions of others), asking and answering questions (e.g., responding to questions of 'What do you think is in the box?'), and/or following requests (e.g., not shaking the box before permitted) would all be indicators of engagement. <i>At a score of 1</i>, a child is barely engaged in the activity. They may often look at the facilitator and aspects of the activity, but their involvement is entirely passive and reactionary (or non-existent). <i>At a score of 7</i>, a child is reacting to the things that happen in the activity, such as responding to and asking questions and following requests. They are constantly active participants for the duration of the activity.								
3.	Was the child <i>thoughtful</i> and <i>planful</i> before acting?	1	2	3	4	5	6	7

	This item focuses on the child’s mental effort put toward the activity. Evidence of being thoughtful includes pauses to think and consider, revision of initial responses (e.g., revises guess of what’s in the box based on new information) and not perseverating on the same mistakes (e.g., keeps flipping the same two cards). <i>At a score of 1</i> , a child is responding quickly (almost reflexively) and repeating the same mistakes in their responses or actions. <i>At a score of 7</i> , a child is taking time and effort to think, remember and avoid repeating mistakes. They may also revise initial responses (e.g., start to reach for a card but, adopting a better strategy, stops and selects another).							
4.	Was the child <i>self-directed</i> , engaging in the activity with little prompting?	1	2	3	4	5	6	7
	This item focuses on whether the child is able to internalise the sequence and requirements of the activity, and independently enact this. This includes not only knowing when it is their turn and/or what to do next, but enacting this with little to no prompting. <i>At a score of 1</i> , a child is highly other-regulated. Even if they appear to know what the next step/requirement is, they consistently require prompting and affirmation from the facilitator to do this (e.g., ‘Yes, it’s your turn’, ‘Now you can shake the box’). <i>At a score of 7</i> , after some initial time to familiarise with the activity, the child does not require reminders, prompts or affirmations to continue the activity (e.g., if a child finds a pair, they independently commence their second turn).							
5.	Did the child <i>control their behaviours</i> and stay within the rules of the activity?	1	2	3	4	5	6	7
	This item focuses on the extent to which children resist behavioural impulses. This could include skipping turns or steps (e.g., skipping the requirement to gently lift), breaking rules of the game or activity or, in more extreme cases, being physically or verbally aggressive. <i>At a score of 1</i> , a child is showing complete disregard for the rules of the game, has engaged in serious physical or verbal aggression towards others and/or is highly disruptive of the game (e.g., wiping cards off the table, immediately lifting the lid of the box). <i>At a score of 7</i> , a child remains within the rules of the activity, is calm and controlled, and has not given in to negative impulses.							
6.	Did the child <i>remain in their seat and rarely fidget</i> ?	1	2	3	4	5	6	7
	This item focuses on whether the child is able to remain reasonably still. Fidgeting with their hands, legs, feet, body, or leaving their chair entirely (other than briefly, to reach something required for the activity) apply to this item. <i>At a score of 1</i> , a child is almost always fidgeting and/or leaving their chair. <i>At a score of 7</i> , a child is rarely fidgeting and does not leave their chair for reasons unrelated to the activity’s requirements.							

7. Did the child follow <i>social conventions</i> of the situation?	1	2	3	4	5	6	7
This item focuses on whether a child adheres to the general social requirements of the situation. This includes things like waiting their turn, not beginning the activity before instructions are complete, being considerate to others (e.g., not talking over others), acknowledging others' successes and responding to questions. <i>At a score of 1</i>, a child is consistently lacking consideration for others or is being actively inconsiderate (e.g., not waiting their turn, actively ignoring). If there are some positive and negative social behaviours, consider the frequency and gravity of these to decide a rating. <i>At a score of 7</i>, a child is consistently considerate of others' turns and speech, is responsive to and considerate of others, and celebrates others' successes.							
8. Was the child willing to <i>risk</i> being wrong when <i>uncertain</i> ? (Curiosity boxes only)	1	2	3	4	5	6	7
This item focuses on whether, under conditions of uncertainty, a child is willing to engage with a problem, challenge or activity despite the risk of being wrong. For instance, despite having little information from which to guess an item that is inside a box, will they engage in the challenge of guessing? <i>At a score of 1</i>, a child does not make any guesses while the boxes are closed, and quickly peeks once feeling the object in their hand. <i>At a score of 7</i>, a child will almost invariably guess what is in the boxes, regardless of the level of uncertainty.							

Appendix F: Stata code for random assignment

```
*****
*** P18385 Emotion Coaching - Randomisation of settings 1/2
*** Part 1 - Data prep and blinding
*** ES 09 Oct 2024
*****

*** Intro
* We are randomising at the nursery setting level (n = 160).
* Stratifiers: hub (8) and setting type (2: PVI vs school-based/maintained)
* Part 1 of the code cleans data and blinds it to setting identity.

*** Content
* 1. Importing settings list data
* 2. Data cleaning and creating internal identifiers
* 3. Blinding setting data

*** 0. Environment

clear
clear matrix
clear mata
set more off
version 17.0
cap log close

* set directory
cd "Y:\P18385-01\Impact Evaluation\Randomisation"
global data = "Y:\P18385-01\Impact Evaluation\Randomisation\Data"
global logs = "Y:\P18385-01\Impact Evaluation\Randomisation\Logs"
global output= "Y:\P18385-01\Impact Evaluation\Randomisation\Output"

* set log file
log using "Y:\P18385-01\Impact Evaluation\Randomisation\Logs\EC setting
randomisation Oct 2024 - part 1.log", replace

*** 1. Importing settings list data

import excel using "Y:\P18385-01\Impact Evaluation\Randomisation\1. Settings list -
data management\settings_list.xlsx", sheet("Sheet 1") firstrow

save "$data\1_settings_list.dta", replace

*** 2. Data cleaning and blinding

* retaining only variables we need - Update: retaining contact details in case
useful for ECUK
* keep setting_name setting_id setting_type original_hub

* checking for duplicate records
duplicates report setting_ID
```

```

* exploring stratifier vars
codebook original_hub
codebook setting_type

* encoding stratifier vars as numeric
* transforming setting type (PVI vs school-based/maintained) into a numerical
variable (1 vs 2)
encode setting_type, gen(type_numeric)
codebook type_numeric

* transforming hub into a numerical variable (1 to 8)
encode original_hub, gen(hub_numeric)
codebook hub_numeric

* creating an internal setting ID only for the randomisation
sort setting_ID
egen natcen_id = seq(), from(1)
* assigning each setting in the list a number 1-160 (not grouped by anything)
* this will be used when linking random treatment allocation back to setting
identity

* saving natcen_id in the original setting list (to enable linking back)
save "$data\1_settings_list.dta", replace

*** 3. Blinding setting data

* dropping setting identifiers
drop setting_name setting_ID ContactName Postcode Email TelephoneNo NewSPH
order natcen_id setting_type type_numeric original_hub hub_numeric

* retaining original hub and type variables to help error checking

* saving blinded dataset
save "$data\2_settings_data_blinded.dta", replace

cap log close

*****
*** P18385 Emotion Coaching - Randomisation of settings 2/2
*** Part 2 - Randomisation
*** ES 09 Oct 2024
*****

*** Intro
* We are randomising at the nursery setting level (n = 160).
* Stratifiers: hub (8) and setting type (2: PVI vs school-based/maintained)
* Part 2 of the code runs randomisation blind to setting identity, and then links
treatment allocation back to setting identity.

*** Content
* 1. Importing blinded setting data
* 2. Creating strata identifier (just for clarity)
* 3. Running the randomisation
* 4. Unblinding randomised data
* 5. Saving unblinded randomised sample files

```

*** 0. Environment

```
clear
clear matrix
clear mata
set more off
version 17.0
cap log close

* set directory
cd "Y:\P18385-01\Impact Evaluation\Randomisation"
global data = "Y:\P18385-01\Impact Evaluation\Randomisation\Data"
global logs = "Y:\P18385-01\Impact Evaluation\Randomisation\Logs"
global output = "Y:\P18385-01\Impact Evaluation\Randomisation\Output"

* set log file
log using "Y:\P18385-01\Impact Evaluation\Randomisation\Logs\EC setting
randomisation Oct 2024 - part 2.log", replace
```

*** 1. Importing blinded setting data

```
use "$data\2_settings_data_blinded.dta", clear
* variables are natcen_id setting_type type_numeric original_hub hub_numeric

* sorting by hub and type
sort hub_numeric type_numeric
```

*** 2. Creating strata identifier (just for clarity)

```
* creating a stratum tag for each combination of hub and setting type
egen strata = group(type_numeric hub_numeric)
summarize strata

* we have 16 strata
* within-strata setting id is created after random number assignment
```

*** 3. Running the randomisation

```
* step 1 - generating a random number for each setting within strata (to create
random setting order within strata)

* set seed 1; obtained from https://www.random.org/integers/ on 09/10/2024
set seed 472263

* generating a random number for each setting within strata
sort strata
by strata: gen rand_num = runiform()

* ordering settings by random number within each stratum
sort strata rand_num

* creating a setting order id by strata and random number
by strata: gen setting_strata_id = _n

* step 2 - running randtreat
```

```
* ssc install randtreat
* help randtreat
* https://ideas.repec.org/c/boc/bocode/s458106.html
*
https://www.researchgate.net/publication/292091060\_Dealing\_with\_misfits\_in\_random\_treatment\_assignment

* set seed 2; obtained from https://www.random.org/integers/ on 09/10/2024
set seed 196100

* running randtreat, stratifying by hub and type, with misfits set to global
randtreat, generate(treat) replace strata(hub_numeric type_numeric) misfits(global)
setseed(196100)

* Stata console note: assignment produces 8 misfits
* Note: misfits(global) selected as approach to deal with misfits, in order to
preserve overall sample 50-50 split between treatment and control
* this prioritises having 80 treatment settings (and 80 control) over having an
exact treat-control split within each individual stratum

* creating labels for generated treatment allocation

lab def treat_lab 0 "Comparison group" 1 "Emotion Coaching group", replace
lab val treat treat_lab

* step 3 - checking balance across treatment and strata

tab treat, m
* ", m" ensures that any missing values are included
* 80 treatment and 80 control units

tab treat strata
* any other checks meaningful?

* step 4 - saving blind randomised sample

save "$data\3_settings_blinded_randomised.dta", replace

*** 4. Unblinding randomised data

use "$data\1_settings_list.dta", clear

* one to one merge by natcen_id
merge 1:1 natcen_id using "$data\3_settings_blinded_randomised.dta"

* all matched (_merge == 3)

* all cases should be in both datasets (_merge == 3)
keep if _merge == 3

* saving unblinded randomised data
save "$data\4_settings_randomised_unblinded.dta", replace

*** 5. Saving output randomised sample files
```

```
* dropping variables we don't need
drop natcen_id type_numeric hub_numeric strata rand_num setting_strata_id _merge

* renaming treatment allocation variable for clarity
rename treat assignment

* saving clean unblinded randomised data
save "$data\5_settings_randomised_clean.dta", replace

* exporting whole sample excel
export excel "$output\Randomised_settings_ALL.xlsx", firstrow(variables) replace

* exporting treat sample excel
use "$data\5_settings_randomised_clean.dta", clear

codebook assignment

keep if assignment == 1
export excel "$output\Randomised_settings_EC.xlsx", firstrow(variables) replace

* exporting control sample excel
use "$data\5_settings_randomised_clean.dta", clear

keep if assignment == 0
export excel "$output\Randomised_settings_Comparison.xlsx", firstrow(variables)
replace

cap log close

*** 6. Balance of characteristics check

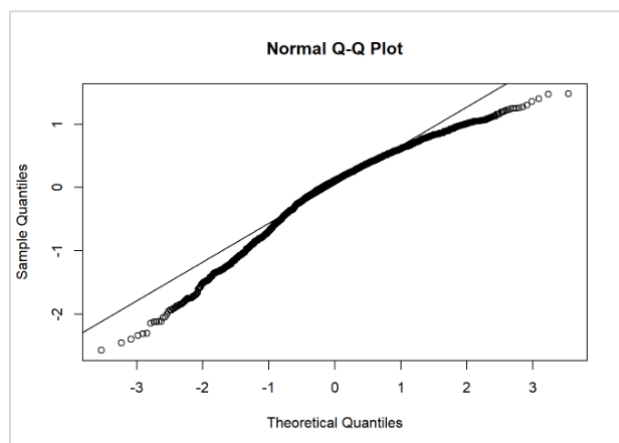
use "$data\5_settings_randomised_clean.dta", clear

tab original_hub assignment
tab setting_type assignment
```

Appendix G: Sensitivity analysis for the primary outcome

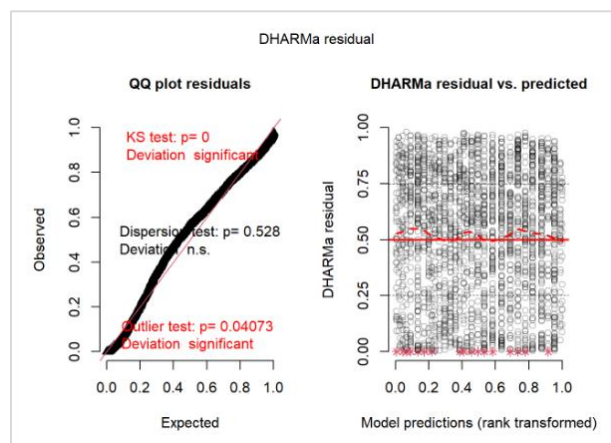
As reported in the Impact evaluation results section, the distribution of primary outcome scores displayed a negative skew of -0.74. Visual inspection of the QQ-plot and simulated residual diagnostics using the DHARMA R package indicated that residuals deviated from normality and that some heteroscedasticity was present (see Figure 1 and Figure 2).

Figure 1. QQ plot of the residuals



As a sensitivity analysis for the primary outcome analysis, we therefore applied a reflect-and-log transformation to practitioner-report self-regulation scores to correct for the violation of assumptions in residuals observed for the

Figure 2. Simulated residual diagnostics



primary outcome model. After transformation, visual inspection of the QQ-plot and simulated residual diagnostics using the DHARMA R package indicated that violations of normality were corrected (see

Figure 3 and **Error! Reference source not found.**). While some heteroscedasticity was still detected in simulated residual diagnostics, the observed deviation was not severe and the sample for this analysis was large ($n = 2,467$), making diagnostic tests highly sensitive to even minor deviations. Therefore, the linear mixed effects regression model was deemed to be sufficiently robust to such deviations.

Figure 3. QQ plot of the residuals after log-transformation

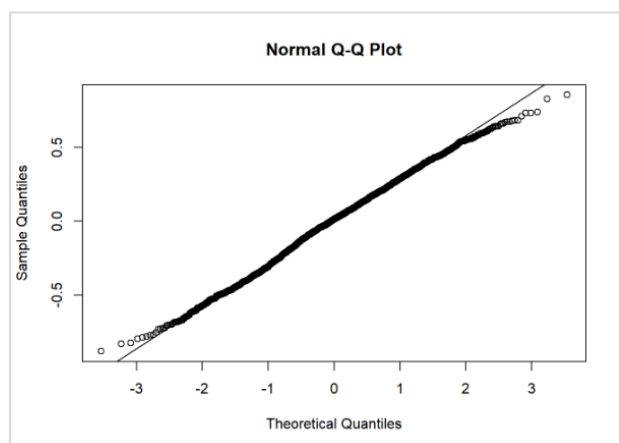
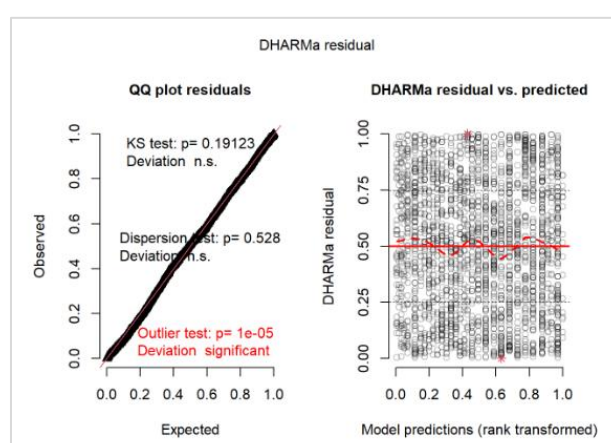


Figure 4. Simulated residual diagnostics after log-transformation



The pattern of results from this sensitivity analysis closely matches results from the main analysis (see Impact evaluation results). In the two-level linear mixed effects regression model predicting log-transformed self-regulation scores and including treatment allocation, randomisation strata, and a random intercept by setting, the adjusted difference in mean log-transformed self-regulation scores between the EC and the PAU group was 0.02 ($p = .430$). The Hedges' g effect size associated with this difference was 0.06 (95% CI: -0.09, 0.22).

Given that the transformation reduced violations and that results from the sensitivity analysis closely match results from the main analysis, the original linear mixed effects model specified for the primary outcome analysis was deemed sufficiently robust to observed deviations and is hence presented as the main primary outcome analysis (see Impact evaluation results).

Table 1. Sensitivity analysis for the primary outcome

Outcome	Unadjusted means				Effect size		
	Intervention group		Control group		Total n	Hedges g (95% CI)	p-value
	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)			
Log-transformed child self-regulation (practitioner report)	1,249 (417)	-0.74 (-0.76, -0.73)	1,218 (446)	-0.76 (-0.78, -0.74)	2,467	0.06 (-0.09, 0.22)	.43

Note. Hedges' *g* effect size was based on the adjusted mean difference and the SD from the total model-based variance components in a null/empty model, as per EEF guidance (see Methods). The number of missing observations presented is from the sample as randomised/randomly sampled.

Table 2. Sensitivity analysis for the primary outcome - additional estimation parameters

Outcome	Unadjusted means		Intervention group		Control group		Effect size	
	Unadjusted difference in means (95% CI)	Adjusted difference in means (95% CI)	n (missing)	SD (variance of outcome)	n (missing)	SD (variance of outcome)	Pooled SD (pooled variance)	Population variance (if applicable)
Log-transformed child self-regulation (practitioner report)	0.02 (-0.01, 0.04)	0.02 (-0.03, 0.07)	1,249 (417)	0.31 (0.10)	1,218 (446)	0.32 (0.10)	0.32 (0.10)	na

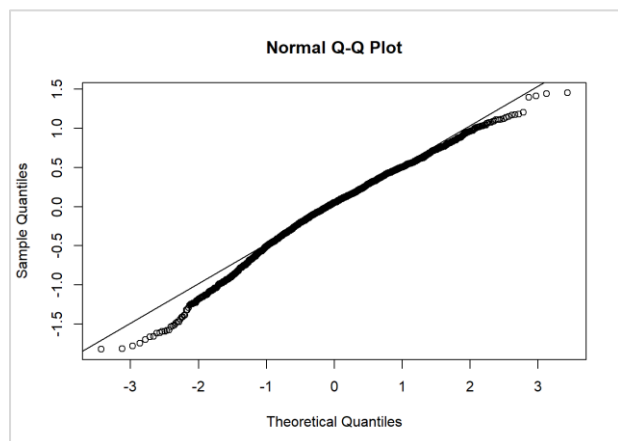
Note. 95% CIs presented are Wald intervals. For the adjusted mean difference, profile CIs rounded to the same values. The pooled variance was calculated from the pooled SD as a weighted average of the standard deviations of both groups (Coe, 2002), not the estimate of the standard deviation of all individuals pooled (see p. 7, EEF analysis guidance, 2022). To account for the multi-level structure of the model, as per EEF guidance, the Hedges' *g* effect size is instead based on the SD from the total model-based variance components in a null/empty model (SD = 0.32) (p. 11, EEF analysis guidance, 2022; see Methods). This SD rounded to the same value as the pooled SD derived using Coe's (2002) formula and also equaled the one-sample unconditional SD for all individuals pooled.

Appendix H: Sensitivity analyses for secondary outcomes

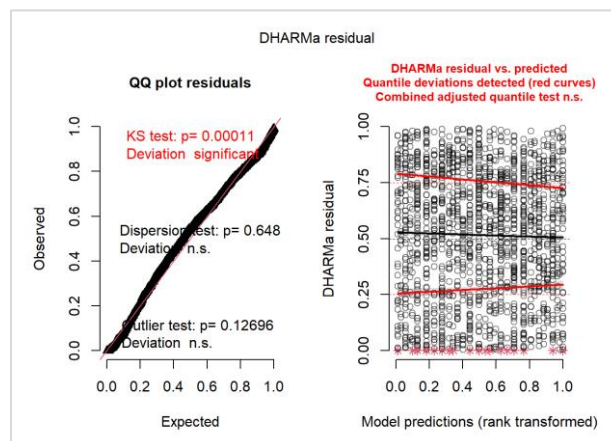
Parent-report self-regulation scores

The distribution of parent-report self-regulation scores similarly displayed a negative skew (-0.61). Visual inspection of the QQ-plot and simulated residual diagnostics using the DHARMA R package indicated that residuals deviated from normality and that some heteroscedasticity was present (see Figures 1 and 2).

Appendix H Figure 1. QQ plot of the residuals

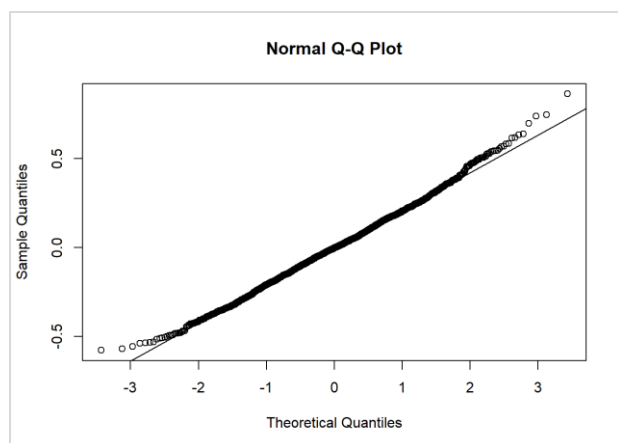


Appendix H Figure 2. Simulated residual diagnostics

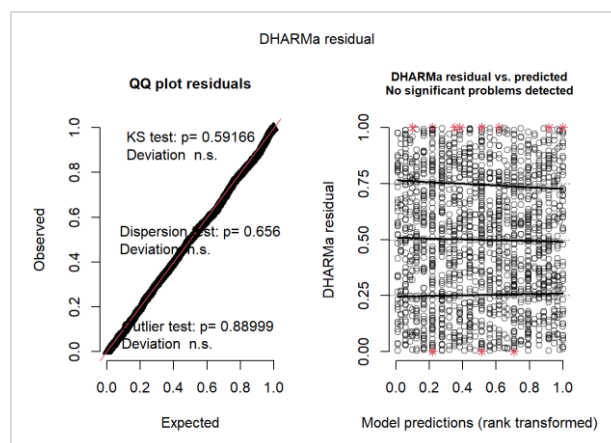


As a sensitivity analysis for this secondary outcome analysis, we applied a reflect-and-log transformation to parent-report self-regulation scores to correct the violations in residuals observed for the main outcome model. After transformation, visual inspection of the QQ-plot and DHARMA simulated residual diagnostics indicated that violations were fully corrected (see Appendix H Figure 3 and Appendix H Figure 4).

Appendix H Figure 3. QQ plot of the residuals after log-transformation



Appendix H Figure 4. Simulated residual diagnostics after log-transformation



In the two-level linear mixed effects regression model, predicting log-transformed self-regulation scores and including treatment allocation, randomisation strata, and a random intercept by setting, the adjusted difference in mean log-transformed self-regulation scores between the EC and the PAU group was -0.02 ($p = .141$). The Hedges' g effect size associated with this difference was -0.10 (95% CI: -0.23, 0.03).

As results from the sensitivity analysis closely match results from the main analysis for this outcome, the original linear mixed effects model specified for this outcome was deemed sufficiently robust to observed deviations and is hence presented as the main analysis for this outcome (see Impact evaluation results).

Appendix H Table 1. Sensitivity analysis - parent-report self-regulation scores

	Unadjusted means				Effect size		
	Intervention group		Control group				
Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n	Hedges g (95% CI)	p-value
Log-transformed child self- regulation (parent report)	875 (791)	-0.90 (-0.92, - 0.88)	793 (871)	-0.88 (-0.90, - 0.86)	1,668	-0.10 (-0.23, 0.03)	.141

Note. Hedges' g effect size was based on the adjusted mean difference and the SD from the total model-based variance components in a null/empty model, as per EEF guidance (see Methods). The number of missing observations presented is from the sample as randomised/randomly sampled.

Appendix H Table 2. Sensitivity analysis for parent-report self-regulation scores - additional estimation parameters

			Intervention group		Control group			
Outcome	Unadjusted difference in means (95% CI)	Adjusted difference in means (95% CI)	n (missing)	SD (variance of outcome)	n (missing)	SD (variance of outcome)	Pooled SD (pooled variance)	Population variance (if applicable)
Log-transformed child self-regulation (parent report)	-0.02 (-0.04, 0.00)	-0.02 (-0.05, 0.01)	875 (791)	0.22 (0.05)	793 (871)	0.23 (0.05)	0.22 (0.05)	na

Note. 95% CIs presented are Wald intervals. For the adjusted mean difference, profile CIs for all outcomes rounded to the same values. The pooled variance was calculated from the pooled SD as a weighted average of the SDs of both groups (Coe, 2002),¹ not the estimate of the SD of all individuals pooled (see the EEF analysis guidance; EEF 2022, p. 7). To account for the multilevel structure of the model, as per the EEF guidance, the Hedges' g effect size is instead based on the SD from the total model-based variance components in a null/empty model (the EEF analysis guidance, EEF, 2022, p. 11; see 'Statistical analysis' section). For all outcomes, this SD rounded to the same value as the pooled SD derived using Coe's (2002) formula and also equalled the one-sample unconditional SD for all individuals pooled.

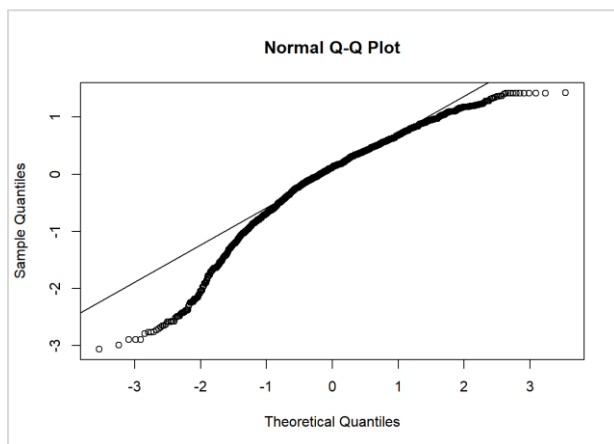
n/a=not applicable.

Practitioner-report prosocial behaviour scores

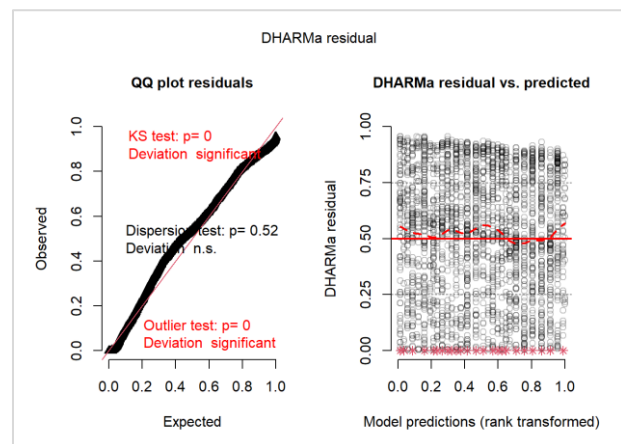
The distribution of practitioner-report prosocial behaviour scores similarly displayed a negative skew (-0.96). Visual inspection of the QQ-plot and simulated residual diagnostics using the DHARMA R package indicated that residuals deviated from normality and some heteroscedasticity present (see Appendix H Figure and Appendix H Figure).

¹ Coe, R. (2002). It's the effect size, stupid. In *British educational research association annual conference* (Vol. 12, p. 14). Available at: <https://f.hubspotusercontent30.net/hubfs/5191137/attachments/ebe/ESguide.pdf> (accessed 30/06/2026)

Appendix H Figure 5. QQ plot of the residuals

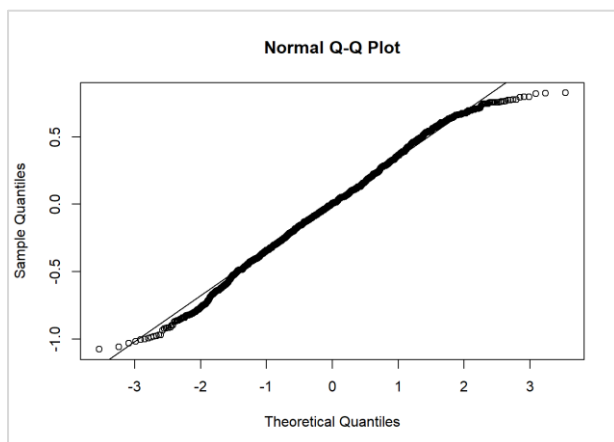


Appendix H Figure 6. Simulated residual diagnostics

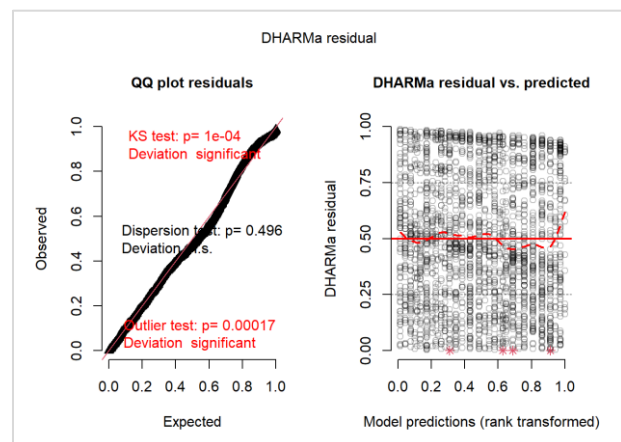


As a sensitivity analysis for this secondary outcome analysis, we applied a reflect-and-log transformation to practitioner-report prosocial behaviour scores to correct for the violation of assumptions in residuals observed for the main model for this analysis. While the log transformation reduced violations, some minor deviations were still observed (see Appendix H Figure and Appendix H Figure)². However, those were not severe, and the sample for this analysis was large ($n = 2,500$), making diagnostic tests highly sensitive to even minor deviations. Therefore, the linear mixed effects regression model was deemed to be sufficiently robust to such deviations.

Appendix H Figure 7. QQ plot of the residuals after log-transformation



Appendix H Figure 8. Simulated residual diagnostics after log-transformation



In the two-level linear mixed effects regression model for this sensitivity analysis, predicting log-transformed prosocial behaviour scores and including treatment allocation, randomisation strata, and a random intercept by setting, the adjusted difference in mean log-transformed prosocial behaviour scores between the EC and the PAU group was 0.05 ($p = .120$). The Hedges' g effect size associated with this difference was 0.13 (95% CI: -0.03, 0.29). This pattern of results matches results from the main analysis (see Impact evaluation results).

Given that the transformation reduced violations and that results from the sensitivity analysis closely match results from the main analysis for this outcome, the original linear mixed effects model specified was deemed sufficiently robust to observed deviations and is hence presented as the main analysis for this outcome (see Impact evaluation results).

² Square-root and Yeo-Johnson transformations of the outcome were also performed, but neither performed better than the log transformation in correcting the violation of assumptions in residual diagnostics.

Appendix H Table 3. Sensitivity analysis - practitioner-report prosocial behaviour scores

	Unadjusted means				Effect size		
	Intervention group		Control group				
Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n	Hedges g (95% CI)	p-value
Log-transformed child prosocial behaviour scores (practitioner report)	1,268 (398)	-0.62 (-0.64, - 0.60)	1,232 (432)	-0.66 (-0.69, - 0.64)	2,500	0.13 (-0.03, 0.29)	.120

Note. Hedges' g effect size was based on the adjusted mean difference and the SD from the total model-based variance components in a null/empty model, as per EEF guidance (see Methods). The number of missing observations presented is from the sample as randomised/randomly sampled.

Appendix H Table 4. Sensitivity analysis for practitioner-report prosocial behaviour scores - additional estimation parameters

			Intervention group		Control group			
Outcome	Unadjusted difference in means (95% CI)	Adjusted difference in means (95% CI)	n (missing)	SD (variance of outcome)	n (missing)	SD (variance of outcome)	Pooled SD (pooled variance)	Population variance (if applicable)
Log-transformed child prosocial behaviour scores (practitioner report)	0.04 (0.01, 0.07)	0.05 (-0.01, 0.12)	1,268 (398)	0.39 (0.15)	1,232 (432)	0.40 (0.16)	0.40 (0.15)	na

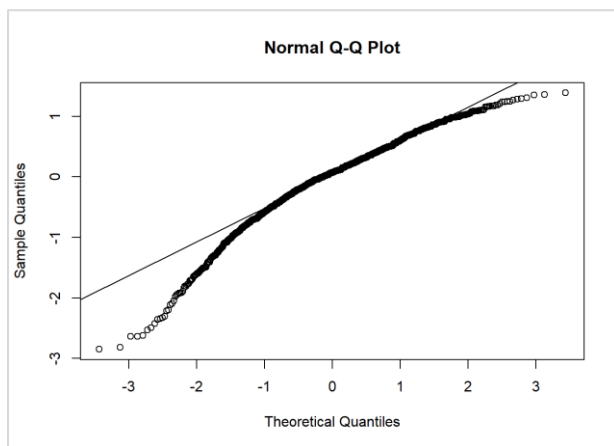
Note. 95% CIs presented are Wald intervals. For the adjusted mean difference, profile CIs for all outcomes rounded to the same values. The pooled variance was calculated from the pooled SD as a weighted average of the SDs of both groups (Coe, 2002),³ not the estimate of the SD of all individuals pooled (see the EEF analysis guidance; EEF 2022, p. 7). To account for the multilevel structure of the model, as per the EEF guidance, the Hedges' g effect size is instead based on the SD from the total model-based variance components in a null/empty model (the EEF analysis guidance, EEF, 2022, p. 11; see 'Statistical analysis' section). For all outcomes, this SD rounded to the same value as the pooled SD derived using Coe's (2002) formula and also equalled the one-sample unconditional SD for all individuals pooled.
n/a=not applicable.

Parent-report prosocial behaviour scores

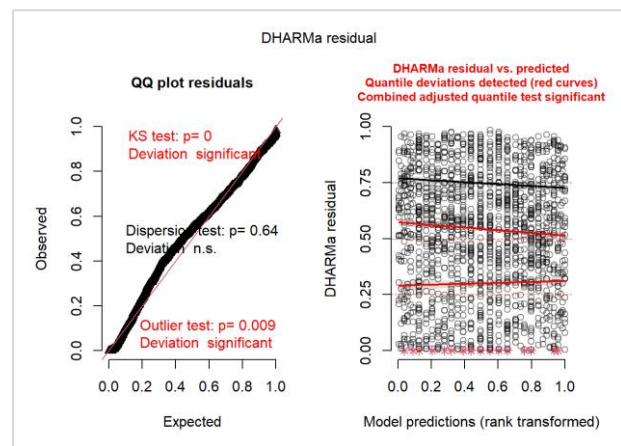
The distribution of parent-report prosocial behaviour scores also displayed a negative skew (-0.96). Visual inspection of the QQ-plot and simulated residual diagnostics using the DHARMA R package indicated that residuals deviated from normality and some heteroscedasticity present (see Appendix H Figure and Appendix H Figure).

³ Coe, R. (2002). It's the effect size, stupid. In *British educational research association annual conference* (Vol. 12, p. 14). Available at: <https://f.hubspotusercontent30.net/hubfs/5191137/attachments/ebe/ESguide.pdf> (accessed 30/06/2026)

Appendix H Figure 9. QQ plot of the residuals

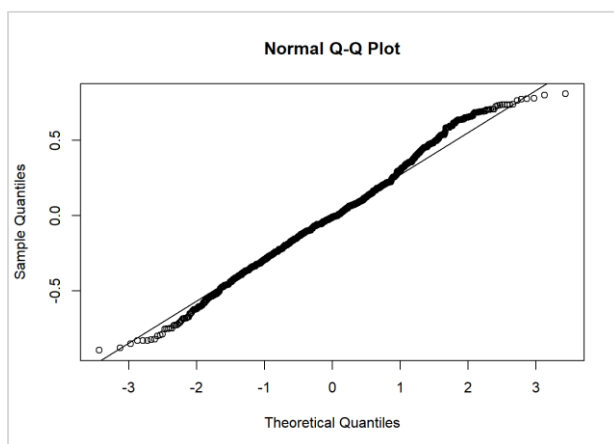


Appendix H Figure 10. Simulated residual diagnostics

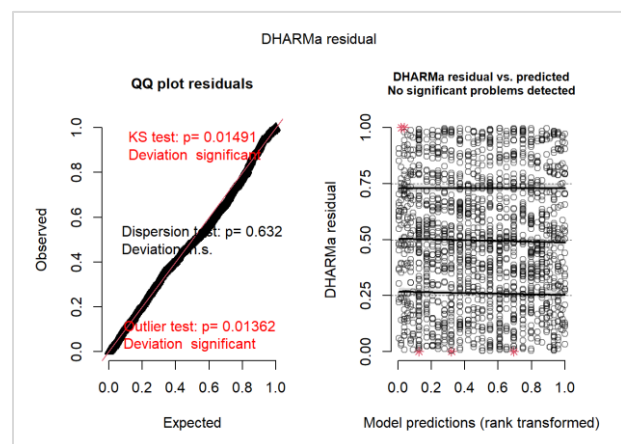


As a sensitivity analysis for this secondary outcome analysis, we therefore applied a reflect-and-log transformation to prosocial behaviour scores to correct for the violations in residuals observed for the main model. After the transformation, the violation of homoscedasticity was corrected (see Appendix H Figure). While some deviation of residuals from normality was observed even after transformation (see Appendix H Figure and Appendix H Figure), this was minor, and the sample for this analysis was large ($n = 1,711$), making diagnostic tests highly sensitive to even minor deviations. Therefore, the linear mixed effects regression model was deemed to be sufficiently robust to such deviations.

Appendix H Figure 11. QQ plot of the residuals after log transformation



Appendix H Figure 12. Simulated residual diagnostics after log transformation



In the two-level linear mixed effects regression model for this sensitivity analysis, predicting log-transformed prosocial behaviour scores and including treatment allocation, randomisation strata, and a random intercept by setting, the adjusted difference in mean log-transformed prosocial behaviour scores between the EC and the PAU group was 0.00 ($p = .843$). The Hedges' g effect size associated with this difference was -0.01 (95% CI: -0.13, 0.11). This pattern of results matches results from the main analysis (see Impact evaluation results).

Given that the transformation reduced violations and that results from the sensitivity analysis closely match results from the main analysis for this outcome, the original linear mixed effects model specified was deemed sufficiently robust to observed deviations and is hence presented as the main analysis for this outcome (see Impact evaluation results).

Appendix H Table 5. Sensitivity analysis - parent-report prosocial behaviour scores

Unadjusted means		Effect size
Intervention group	Control group	

Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n	Hedges g (95% CI)	p-value
Log-transformed child prosocial behaviour scores (parent report)	897 (769)	-0.70 (-0.72, -0.68)	814 (850)	-0.69 (-0.71, -0.67)	1,711	-0.01 (-0.13, 0.11)	.843

Note. Hedges' g effect size was based on the adjusted mean difference and the SD from the total model-based variance components in a null/empty model, as per EEF guidance (see Methods). The number of missing observations presented is from the sample as randomised/randomly sampled.

Appendix H Table 6. Sensitivity analysis for parent-report prosocial behaviour scores - additional estimation parameters

			Intervention group		Control group			
Outcome	Unadjusted difference in means (95% CI)	Adjusted difference in means (95% CI)	n (missing)	SD (variance of outcome)	n (missing)	SD (variance of outcome)	Pooled SD (pooled variance)	Population variance (if applicable)
Log-transformed child prosocial behaviour scores (parent report)	-0.01 (-0.04, 0.02)	0.00 (-0.04, 0.04)	897 (769)	0.31 (0.10)	814 (850)	0.32 (0.10)	0.32 (0.10)	na

Note. 95% CIs presented are Wald intervals. For the adjusted mean difference, profile CIs for all outcomes rounded to the same values. The pooled variance was calculated from the pooled SD as a weighted average of the SDs of both groups (Coe, 2002),⁴ not the estimate of the SD of all individuals pooled (see the EEF analysis guidance; EEF 2022, p. 7). To account for the multilevel structure of the model, as per the EEF guidance, the Hedges' g effect size is instead based on the SD from the total model-based variance components in a null/empty model (the EEF analysis guidance, EEF, 2022, p. 11; see 'Statistical analysis' section). For all outcomes, this SD rounded to the same value as the pooled SD derived using Coe's (2002) formula and also equalled the one-sample unconditional SD for all individuals pooled.
n/a=not applicable.

⁴ Coe, R. (2002). It's the effect size, stupid. In *British educational research association annual conference* (Vol. 12, p. 14). Available at: <https://f.hubspotusercontent30.net/hubfs/5191137/attachments/ebe/ESguide.pdf> (accessed 30/06/2026)

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