EasyPeasy: Learning through play

Addendum Report

March 2023

Lyn Robinson-Smith, Christine Merrell, Victoria Menzies, Helen Cramman, Caroline Fairhurst, Jess Hugill-Jones, Yuqian (Linda) Wang, Sarah Hallett, Nadin Beckmann, Professor Carole Torgerson, Susan Stothard

The Education Endowment Foundation is an independent charity dedicated to breaking the link between family income and education achievement. We support schools, nurseries and colleges to improve teaching and learning for 2 – 19-year-olds through better use of evidence.

We do this by:

- **Summarising evidence.** Reviewing the best available evidence on teaching and learning and presenting in an accessible way.
- **Finding new evidence.** Funding independent evaluations of programmes and approaches that aim to raise the attainment of children and young people from socio-economically disadvantaged backgrounds.
- **Putting evidence to use.** Supporting education practitioners, as well as policymakers and other organisations, to use evidence in ways that improve teaching and learning.

We were set-up in 2011 by the Sutton Trust partnership with Impetus with a founding £125m grant from the Department for Education. In 2022, we were re-endowed with an additional £137m, allowing us to continue our work until at least 2032.

For more information about the EEF or this report please contact:

Education Endowment Foundation
5th Floor, Millbank Tower
21–24 Millbank
SW1P 4QP

info@eefoundation.org.uk

www.educationendowmentfoundation.org.uk

Contents

About the evaluator

The project was independently evaluated by a team from Durham University and York Trials Unit, University of York:

Lyn Robinson-Smith, Victoria Menzies, Helen Cramman, Yuqian (Linda) Wang, Caroline Fairhurst, Sarah Hallett, Jess Hugill-Jones, Nadin Beckmann, Christine Merrell, Carole Torgerson and Susan Stothard.

The lead evaluators were Lyn Robinson-Smith, Victoria Menzies, and Helen Cramman.

Contact details:

Name: Dr Lyn Robinson-Smith

Address: Department of Health Sciences, Faculty of Sciences, ARRC Building, University of York, York, YO10 5DD

Tel: 01904 321692

Email: lyn.robinson-smith@york.ac.uk

Executive summary

The project

This addendum should be read in conjunction with the EasyPeasy: Learning Through Play Evaluation Report (Robinson-Smith et al., 2019), which can be found **here**. The original trial related to 1,205 pupils aged three to four years in nursery classes during the 2017/2018 academic year. A randomised controlled trial was used to evaluate the impact of EasyPeasy on children's language development, compared to 'business as usual' within the control schools.

EasyPeasy provided parents with access to games to play with their preschool children. These were sent via weekly text messages during the 20-week intervention period covering the Early Years Foundation Stage (EYFS) areas of learning. The aim was to support children's engagement with their parents in addition to improving their language and self-regulation skills.

This addendum report focuses on whether the EasyPeasy intervention, administered in nursery, had any longer-term effects at the end of reception. Early Years Foundation Stage Profile (EYFSP) assessment data for Communication and Language, Personal, Social and Emotional Development (PSED), and 'Good Level of Development' (GLD) were used to measure impact. The EYFSP is a teacher-reported assessment undertaken at the end of reception—the first year of statutory education. This assessment was completed in the summer term of the 2018/2019 academic year.

Summary of previous results

In the main report, children in EasyPeasy schools made no additional months' progress in language development compared to children in other schools, according to the domains within the Clinical Evaluation of Language Fundamentals (CELF) assessment. There were small increases in the 'word structure' and 'concepts and following directions' language subscales equivalent of one month of additional progress. They made small increases in self-regulation compared to the those in other schools. It should be noted, however, that children who received the intervention were unable to demonstrate prosocial behaviour and behavioural self-regulation as favourably as those who did not. Parents who accessed the EasyPeasy materials reported improvements in the home learning environment; however, these findings should be treated with caution due to the small number of parents assessed.

Summary of new results

This longitudinal analysis looked at children 12 months after the intervention delivery using the EYFSP as an outcome measure. Eighty-one percent of children in EasyPeasy schools achieved a Good Level of Development compared to 77% in control schools, which equates to approximately two months' additional progress, on average. Children in EasyPeasy schools made the equivalent of one month's additional progress in Communication and Language and in Personal, Social and Emotional Development, on average, compared to children in other schools.

As with any study, there is always some uncertainty around the result and a range of possible impacts of the programme. For Communication and Language, this includes negative effects of two months less progress to positive effects of up to three months' additional progress. For PSED and self-regulation, the range of impacts includes an effect of no progress to positive effects of three months' additional progress. For GLD, this includes an effect of no months' progress and positive effects of up to four months' additional progress. Therefore, these results are not statistically significant. This means that the statistical evidence does not meet the threshold set by the evaluator to conclude that the true impact was non-zero.

Exploratory analysis indicated that boys in EasyPeasy schools made the equivalent of two months' additional progress in Communication and Language compared to boys in the control group. This result was not seen among girls, who made the equivalent of no months' additional progress in the same area of learning. Drawing upon the results of the longitudinal analysis, the main evaluation, and wider literature, we can surmise that EasyPeasy may have improved participating boys' home learning environment and the quality of stimulation parents/carers provided beyond intervention delivery resulting in observed improved language skills. Such improvements may not have been observed amongst girls as their home learning environment was already of better quality than boys and so the intervention might have been

similar to their existing experiences. It is not possible to deduce whether this was the case as this is beyond the scope of this longitudinal analysis.

The results of the main evaluation and this analysis may differ for a number of possible reasons. These could include certain limitations the EYFSP outcome measure presents. The three assessment levels of 'emerging', 'expected', and 'exceeding' against the early learning goals provide low sensitivity—and teacher-led assessment can introduce unintentional bias. The level of parental engagement with EasyPeasy post-nursery is unknown and the gender difference regarding impact was not indicated in the rigorous original trial, which addressed results immediately post-test.

Table 1: Summary of impact on primary and longitudinal outcomes

Outcome/ Group	Effect size (95% confidence interval)	Estimated months' progress	EEF security rating	No. of pupils	P value	EEF cost rating
CELF Core Language (primary outcome—immediate post-test)	0.04 (-0.10, 0.18)	0	🔒🔒🔒🔓🔓	1,128	0.60	£ £ £ £
EYFSP Good Level of Development (12-month follow up)	0.15 (-0.05, 0.35)	2	N/A	1,161	0.14	N/A
EYFSP Communication and Language (12-month follow up)	0.06 (-0.10, 0.20)	1	N/A	1,161	0.47	N/A
EYFSP Personal, Social and Emotional Development (12-month follow up)	0.07 (-0.09, 0.22)	1	N/A	1,161	0.39	N/A

Key conclusions
1. Pupils who participated in EasyPeasy were more likely to achieve a 'good level of development' (GLD) as defined by the EYFSP, equating to two months' of additional progress, on average, compared to children in other schools.
2. EYFSP assessments implemented 12-months after receiving the intervention suggest that pupils in EasyPeasy schools made, on average, one month of additional progress in Communication and Language, compared to children in non-EasyPeasy schools.
3. Pupils who participated in EasyPeasy made the equivalent of one month of additional progress in PSED, on average, compared to children in other schools.
4. Boys in EasyPeasy schools made the equivalent of two months' additional progress in Communication and Language, on average, compared to boys in other schools. This result was not seen in girls who made the equivalent of no months' progress in the same area of learning.

Introduction

Intervention

The EasyPeasy intervention provided game ideas to the parents of preschool children for play-based learning at home, with the aim of developing children's language development and self-regulation. Parents received weekly text messages directly from EasyPeasy over a 20-week period which linked to 65 videos of example games that they could play with their children, plus tips and advice about learning through play. The games targeted skills within the Early Years Foundation Stage Profile (EYFSP) areas of learning.

In total, 102 primary schools with an associated nursery from nine local authorities in England (Bedford, Camden, Coventry, Doncaster, Durham, Knowsley, Luton, Islington, and Oldham) participated in the cluster randomised controlled trial (RCT) between September 2017 and July 2019. Schools were randomly allocated to either the intervention group (business as usual plus EasyPeasy) or the control group (business as usual). Participating children (1,205 were included in the evaluation) were assessed pre and post intervention by trained independent research assistants using the Clinical Evaluation of Language Fundamentals (CELF-Preschool 2 UK) assessment to test the impact of the EasyPeasy intervention on language development. Personal, social, emotional, and behavioural outcomes were also assessed pre and post intervention using the teacher-reported Child Social Behaviour Questionnaire (CSBQ) developed by Howard and Melhuish (2016). Interviews, case studies, focus groups, and a survey were conducted to explore how the programme was implemented and to obtain feedback from participants.

The original report (Robinson-Smith et al., 2019)[1] provides an in-depth description of the intervention and the findings of this RCT on the language outcomes of children aged three to four years old when tested within the same academic year as the intervention.

Evaluation objectives

EasyPeasy aimed to improve early child development through increasing positive parent-child interactions and learning at home via play, and for these changes to become embedded and long lasting beyond intervention delivery (see Robinson-Smith et al., 2018, Appendix 1). The aim of this longitudinal analysis was to access participating pupils' EYFSP via the National Pupil Database (NPD) to determine if the EasyPeasy intervention, administered to pre-school children (aged three to four years old), had any longer-term effects at the end of reception (aged four to five). To do so, this longitudinal analysis focused on relevant EYFSP early learning goals that aligned to the outcomes of the main evaluation as presented in the original EasyPeasy report and the logic model (see Robinson-Smith et al., 2019). This included children's communication and language skills, self-regulation/PSED, and readiness for school.

As outlined in the statistical analysis plan (SAP) for this longitudinal follow-up (Fairhurst and Robinson-Smith, 2019),[2] the key research questions this addendum will answer are:

1. What is the impact of the EasyPeasy intervention on the communication and language development of children at the end of reception, as measured by the Communication and Language learning area of the EYFSP?

2. What is the impact of the EasyPeasy intervention on the PSED of children at the end of reception, as measured by the Personal, Social and Emotional Development learning area of the EYFSP?

3. What is the impact of the EasyPeasy intervention on children's overall development and school readiness, as measured by whether the child achieved a good level of development (GLD) in the EYFSP?

[1] https://educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/EasyPeasy.pdf
[2] https://d2tic4wvo1iusb.cloudfront.net/documents/projects/EasyPeasy_Longitudinal_analysis_plan.pdf?v=1630925488

Project team

The independent evaluation was led by a team of researchers from Durham University in collaboration with the York Trials Unit at the University of York.

The principal investigator (PI) for the project was Dr Lyn Robinson-Smith. Lyn's role included designing the trial, writing the protocol, contributing towards the (later stages of the) writing of the main report, and co-writing the addendum report. Lyn was on maternity leave between September 2017 and October 2018 when recruitment and pre- and post-intervention testing took place. Lyn moved from Durham University to York Trials Unit, University York, in October 2018.

Professor Christine Merrell, Durham University, became acting PI from September 2017 to December 2017. Christine contributed to the design and conduct of the trial and provided expertise to interpret the findings from the outcome measures and advised on the implementation of the evaluation.

Victoria Menzies, Durham University, became acting PI of the evaluation from December 2017 to October 2018. Her role included management of the project and leading on the process evaluation.

Dr Helen Cramman, Durham University, oversaw the impact evaluation for the project, led the team conducting the baseline assessments, and coordinated and contributed to the writing of the final report, and was PI for the project at Durham University from October 2018.

Caroline Fairhurst, York Trials Unit, University of York, contributed to the design and conduct of the trial, developed the main evaluation and longitudinal follow-up addendum SAPs, undertook the statistical analysis for the impact evaluation and longitudinal follow-up, contributed to the writing of the main report, and co-wrote the addendum report.

Jess Hugill-Jones, York Trials Unit, University of York, contributed to the writing of the addendum report.

Dr Yuqian (Linda) Wang was the main research associate on the project. Within her role, she conducted the case studies and Home Observation and Measurement of Environment (HOME) visits, contributed to training sessions for CELF-Preschool 2 UK assessors, conducted quality assurance of the CELF-Preschool 2 UK assessment process, and contributed to the writing of the final report.

Sarah Hallett coordinated pre- and post-intervention testing, oversaw the data collection, entry, cleaning, and coding of impact evaluation and school destination data, managed the finances and HR requirements for the evaluation, and contributed to the writing of the report. She was also the first point of contact for nurseries and independent assessors.

Dr Nadin Beckmann devised and delivered training in the administration of the CELF-Preschool 2 UK assessment in the context of this trial and advised on appropriate quality assurance processes to ensure the reliability of data collected.

Professor Carole Torgerson contributed to the design and conduct of the trial and provided expertise to interpret the findings from the outcome measures and advised on the implementation of the evaluation.

Dr Susan Stothard advised on appropriate outcome measures for the trial. A team of trained assessors (employed by Durham University and trained by Dr Nadin Beckmann) administered the CELF assessments. Trained research assistants (employed by Durham University and trained by Dr Linda Wang) completed the HOME assessments.

EasyPeasy was developed and delivered by a team from EasyPeasy including:

Jen Lexmond, Founder and CEO;

Jane Bradbury, Account Manager; and

Nicola Doherty, Research Manager.

Methods

Trial design

This trial was a pragmatic, two-armed, cluster efficacy RCT conducted with random allocation at the nursery level in a 1:1 ratio to either the intervention group, which received the EasyPeasy (20-week) intervention, or a 'business as usual' control group with waitlist.

Participant selection and sample size

As detailed within the main evaluation (Robinson-Smith et al., 2019, p.29), within participating nursery classes, all parents of children aged three to four years old who were due to start reception in September 2018 following the intervention were invited to participate in the trial. In total, 1,488 pupils across the 102 participating nursery classes were eligible to participate. A total of 1,205 pupils completed the necessary pre-test (CELF-Preschool 2 UK) and were subsequently randomised. For this longitudinal follow-up, the research team requested NPD data for randomised pupils only, provided their parents gave consent for their child's data to be accessed. A total of 1,205 pupils were randomised but, of these, two did not have the appropriate consent so NPD data were requested for 1,203 pupils.

Addendum outcome measures

The EYFSP is teacher-reported and assessed at the end of a child's first year at primary school. Please note that the following description of the EYFSP was correct at the time of assessment relevant for this follow-up; changes to the EYFSP framework have since been made and the new version became law in September 2021.[3]

The primary outcome for this longitudinal analysis is the Communication and Language (CL) EYFSP score (Research Question 1). CL is a specific area of learning measured in the EYFSP. Within this area, there are three Early Learning Goals (ELG): 'listening and attention', 'understanding', and 'speaking'. Each ELG has three separate achievement levels: 1, 'emerging', 2, 'expected', and 3, 'exceeding'. The sum of the three ELGs were taken to produce a summary score for CL ranging from three to nine. This was analysed as a continuous outcome.

PSED is another learning area measured by the EYFSP consisting of three ELGs: 'self-confidence and self-awareness', 'managing feelings and behaviour', and 'making relationships'. Again, all three are assessed on the three-point achievement scale detailed above and a summary score was produced by adding together the three scores giving a possible total of three to nine. This is a secondary outcome (Research Question 2) and was analysed as a continuous measure.

Additionally, the EYFSP provides a general measure of 'good development' (GLD), which was another secondary outcome of this analysis (Research Question 3). A child is defined as reaching a GLD if they achieved at least the 'expected' level for the ELGs in the prime areas of earning—'personal, social and emotional development', 'physical development', and 'communication and language'—and in the specific learning areas of mathematics and literacy.

GLD is a pre-calculated, dichotomous variable (yes/no) and provided as a single variable in the national pupil database (NPD).

Details of the trial and the outcomes for this longitudinal follow-up are provided in Table 2.

[3]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/919681/Early_adopter_schools_EYFS_profile_handbook.pdf

Table 2: Longitudinal analysis—links between trial outcomes and relevant EYFSP areas of learning

Trial type and number of arms		Two-armed cluster randomised controlled trial (random allocation at school level).
Unit of randomisation		School.
Minimisation factor		Number of children with parental consent per school (two levels: <14; ≥14).
Primary outcome	variable	Communication and language.
	measure (instrument, scale)	Summary score of the following EYFSP ELGs from the Communication and Language area of learning: 1. listening and attention (NPD variable name *FSP_COM_G01*); 2. understanding (NPD variable name *FSP_COM_G02*); and 3. speaking (NPD variable name *FSP_COM_G03*). Score range 3–9, obtained from NPD.
Secondary outcomes	variable	Self-regulation/personal, social and emotional development.
	measure (instrument, scale)	Summary score of the following EYFSP ELGs from the Personal, Social and Emotional Development area of learning: 1. self-confidence and self-awareness (NPD variable name *FSP_PSE_G06*); 2. managing feelings and behaviour (NPD variable name *FSP_PSE_G07*); and 3. making relationships (NPD variable name *FSP_PSE_G08*). Score range 3–9, obtained from NPD.
	variable	School readiness.
	measure (instrument, scale)	Achieving a good level of development as measured by the NPD variable, *FSP_GLD*.

EYFSP assessments are conducted in the summer term of the academic year. In the EasyPeasy study, the intervention period ended in July 2018 and the EYFSP was conducted in schools, as routine, in July 2019. The results of the EYFSP are made available within the NPD in the autumn, following the assessments in the summer, for researchers to request access to if required. We planned to access the results for children participating in the EasyPeasy evaluation to assess the longer-term impact of the intervention. An application for NPD data was submitted to the Department for Education (DfE) via the Office for National Statistics (ONS) Secure Research Service (SRS) in December 2019. The research team provided pupil details—pupil trial ID, forename, surname, date of birth, home postcode, school destination name, school post code, and school EduBase unique reference number, URN (children are only assigned a unique pupil number (UPN) when they reach primary school, so this was not available to match on)—for the DfE to match to the requested NPD data. The export of NPD data was transferred to the ONS SRS for the evaluation team at University of York to analyse and did not contain personal data. The only (meaningless) identifiers transferred were the pupil matching reference (PMR) and the trial ID. Data from the main evaluation was then transferred to the SRS early in 2020 so it could be merged, via the pupil trial ID, with the NPD data for analysis. It was originally planned that the evaluation team would access the NPD data in spring 2020; however, owing to delays caused by the COVID-19 pandemic (and associated closures of the ONS Safe Rooms), this data was only accessed in autumn 2021. Therefore, the publication of this report, hoped to be April 2020, was delayed.

The trial statistician, Caroline Fairhurst, is an ONS accredited researcher; she submitted the application and accessed and analysed the data.

Analysis

Analyses were conducted on an intention-to-treat basis, using two-sided significance at the 5% level, using Stata v17.

Outcome data is summarised descriptively for the two groups. Histograms are presented for the summary CL and PSED scores.

Primary and secondary analysis

The primary outcome for this longitudinal analysis of the summary EYFSP CL score was analysed via a multilevel mixed-effect linear regression model at the pupil level. Group allocation, baseline Core Language Standard Score, and the minimisation factor of number of children with parental agreement to participate within the nursery class (in its continuous form as included in the analyses performed for the main evaluation) were included as fixed effects in the model. It is good practice to include minimisation factors as covariates in analysis models. The factor of number of children with parental consent was dichotomised for use in the minimisation (to an indicator variable for whether it was <14 or ≥14) but the continuous form was used in the model as this provided more information. This was consistent with the analysis of the outcomes in the main report. Nursery was included as a random effect. The secondary outcome of summary score for PSED was similarly analysed. Robust standard errors were specified to account for any potential heteroscedasticity and the normality of residuals was assessed using a QQ plot.

Effect sizes based on the difference between the groups at the post-test are presented as an adjusted mean difference and Hedges' g with 95% confidence intervals (CI) and p-value. Hedges' g effect sizes were calculated by dividing the adjusted mean difference between the intervention and control group by the pooled unconditional standard deviation obtained from the model run without these covariates (square root of the sum of the within- and between-cluster variances). A 95% CI for the effect size was calculated by dividing the 95% confidence limits for the adjusted mean difference by this same denominator. All parameters used in these calculations are provided. The Hedges' g effect sizes are converted to estimated additional months' progress using EEF guidelines.[4] The intra-cluster correlation coefficient (ICC) and 95% CI at the post-test associated with nursery are presented.

The Pearson correlation coefficient between baseline Core Language Standard Score and these two EYFSP summary scores are reported.

[4] EEF-Toolkit-guide.pdf (d2tic4wvo1iusb.cloudfront.net)

Pupil characteristics and measures of prior attainment for those included in the primary analysis of this longitudinal follow-up are summarised. No formal statistical comparisons were undertaken on the data. The unadjusted differences between groups on the pre-tests of the CELF and CSBQ are reported as a Hedges' g effect size with 95% CI.

The secondary, dichotomous outcome of GLD was analysed via a mixed-effect logistic regression model, adjusted as for the primary model specified above. The treatment effect is expressed as an odds ratio (OR) with a 95% CI and p-value; in addition, the OR (and 95% CI limits) has been converted to an estimated Hedges' g effect size using the Cox index as follows (What Works Clearinghouse, n.d., pp.13–14):

$$d_{Cox} = \omega[ln(OR)]/1.65$$

where $\omega = \left[\frac{1-3}{(4N-9)}\right]$ and N is the total sample size.

Subgroup analysis

In line with the statistical analyses for the main evaluation as detailed in the published SAP (Fairhurst, 2018),[5] three subgroup analyses were conducted. These considered the following subgroups:

- eligibility for the Early Years Pupil Premium (EYPP) – Yes/No;
- English is an Additional Language (EAL) – Yes/No; and
- Gender – Male/Female.

Subgroup analyses were undertaken by repeating the primary analysis model but additionally including the subgroup variable and an interaction term between the variable and group allocation. This was only undertaken for the primary outcome of CL. In post-hoc analyses, the primary longitudinal model was run only including males and females separately.

Descriptive analysis by local authority

It was originally intended to present a table depicting the percentage of pupils achieving GLD by randomised group and local authority (LA). However, a number of cells in this table would have contained figures calculated from a small number of pupils or nurseries. Such substantial alteration would have been required to the table to achieve 'small cell suppression' and be approved by the ONS as to render this analysis futile. Therefore, a summary of GLD by randomised group and LA is not presented here.

[5] **https://d2tic4wvo1iusb.cloudfront.net/documents/pages/projects/EasyPeasy_SAP_final.pdf?v=1630925488**

Impact evaluation

Attrition

A total of 1,205 pupils were randomised but, of these, two (both in the intervention group) did not have the appropriate consent for data from the NPD to be requested. Therefore, NPD data were requested for 1,203 pupils (intervention: n = 593; control: n = 610) from 102 nurseries, of which EYFSP data could be matched for 1,163 (96.7%; intervention: n = 579, 97.6%; control: n = 584, 95.7%). Pre-test Core Language Standard Score data and EYFSP CL score were available for 1,161 pupils (intervention group: n = 579; control group: n = 582) across all 102 nurseries. These were included in the primary longitudinal analysis model. This represents 96.3% of the randomised population (intervention group: 97.3%; control group: 95.4%), so the overall attrition rate was 3.7% (intervention group: 2.7%; control group: 4.6%). This is a lower level of attrition than was observed in the primary analysis in the main evaluation in which 1,128 pupils were included, so the overall attrition rate was 6.4% (intervention group: 5.5%; control group: 7.2%).

Pupil characteristics of analysed sample

The characteristics of the 1,161 pupils in the analysed sample are presented in Table 3 (the HOME outcome is not included in this table since it was only conducted with a subset of pupils) and are broadly similar between the intervention group and the control group. Since no formal hypothesis testing was performed on baseline data, comparisons are made by eye only.

The number of children included in the primary longitudinal analysis model from each of the 102 nurseries ranged from 4 to 19 (median 12) in the intervention group and 6 to 25 (median 11) in the control group.

Pupils included in these analyses were aged, on average, 46 months (3.8 years) when they initially sat the pre-test, CELF-Preschool 2 UK; half were male (49.1% in the intervention group and 48.3% in the control group) and nearly two-thirds were white (intervention group 66.0%; control group 66.8%). A higher percentage of pupils in the control group were eligible for EYPP at nursery, were EAL, and had special education needs and disabilities (SEND) than in the intervention group, by chance.

The mean (SD) pre-test Core Language Standard Score was slightly higher (indicating a better outcome) in the intervention group than the control group (intervention group: 25.2, SD 8.9; control group: 24.6, SD 8.3; effect size 0.07, 95% CI: -0.05 to 0.18).

The characteristics of the pupils analysed in this longitudinal follow-up were virtually identical to those randomised and those analysed in the primary analysis for the main evaluation (see Tables 11 and 13 of Robinson-Smith et al., 2019, pp.34–35 and pp.37–38).

Table 3: Pupil characteristics as analysed (n = 1,161)

Pupil-level (categorical)	Intervention group (n = 579)		Control group (n = 582)	
	n/N (missing)	Count (%)[a]	n/N (missing)	Count (%)[a]
Gender, male		284 (49.1)		281 (48.3)
Gender, female or missing[b]		295 (50.9)		301 (51.7)
Ethnicity				
White	579/579 (0)	382 (66.0)	582/582 (0)	389 (66.8)
Black/Caribbean		26 (4.5)		31 (5.3)
Asian		91 (15.7)		101 (17.4)
Mixed		37 (6.4)		33 (5.7)

Middle Eastern or Other[c]		12 (2.1)		10 (1.7)	
Unknown		31 (5.4)		18 (3.1)	
Eligible for EYPP	497/579 (82)	71 (14.3)	470/582 (112)	132 (28.1)	
EAL	546/579 (33)	137 (25.1)	564/582 (18)	165 (29.3)	
SEND	544/579 (35)	20 (3.7)	552/582 (30)	40 (7.2)	
Pupil-level (continuous)	**n (missing)[d]**	**Mean (SD)**	**n (missing)[d]**	**Mean (SD)**	**Effect Size**
Age, months	579 (0)	46.0 (4.0)	582 (0)	45.5 (3.5)	N/A
CELF- Preschool 2 UK (scaled scores)					
Core Language Standard Score	579 (0)	25.2 (8.9)	582 (0)	24.6 (8.3)	0.07 (-0.05, 0.18)
Sentence Structure	>569 (<10)	7.9 (3.3)	>572 (<10)	7.8 (3.1)	0.05 (-0.07, 0.16)
Word Structure	>569 (<10)	8.7 (3.5)	>572 (<10)	8.4 (3.3)	0.07 (-0.04, 0.19)
Expressive Vocabulary	>569 (<10)	8.8 (3.4)	>572 (<10)	8.5 (3.3)	0.10 (-0.02, 0.22)
Concepts and Following Directions	538 (41)	7.3 (3.5)	516 (66)	7.0 (3.3)	0.10 (-0.02, 0.22)
Pupil-level (continuous)	**n (missing)[d]**	**Mean (SD)**	**n (missing)[d]**	**Mean (SD)**	**Effect Size**
CELF- Preschool 2 UK (raw scores)					
Sentence Structure	>569 (<10)	10.0 (4.9)	>572 (<10)	9.7 (4.7)	0.06 (-0.05, 0.18)
Word Structure	>569 (<10)	10.3 (5.6)	>572 (<10)	9.7 (5.2)	0.12 (0.00, 0.23)
Expressive Vocabulary	>569 (<10)	13.9 (7.2)	>572 (<10)	13.0 (7.0)	0.13 (0.01, 0.25)
Concepts and Following Directions	538 (41)	8.0 (4.9)	516 (66)	7.4 (4.5)	0.12 (0.00, 0.24)
Child Self-regulation and Behaviour Questionnaire					
Sociability	>569 (<10)	3.6 (0.9)	549 (33)	3.6 (0.9)	-0.02 (-0.14, 0.1)
Externalising	>569 (<10)	1.7 (0.8)	549 (33)	1.7 (0.8)	0.03 (-0.09, 0.15)
Internalising	>569 (<10)	1.6 (0.6)	549 (33)	1.6 (0.7)	-0.05 (-0.17, 0.06)
Prosocial behaviour	>569 (<10)	3.6 (0.8)	549 (33)	3.5 (0.9)	0.10 (-0.02, 0.22)
Behavioural self-regulation	>569 (<10)	3.7 (0.9)	549 (33)	3.7 (0.9)	0.01 (-0.10, 0.13)
Cognitive self-regulation	>569 (<10)	3.3 (0.8)	549 (33)	3.3 (0.9)	0.07 (-0.05, 0.19)
Emotional self-regulation	>569 (<10)	3.9 (0.7)	549 (33)	3.9 (0.8)	-0.07 (-0.19, 0.05)

[a] Percentages out of valid (non-missing) cases for categorical variables except gender.
[b] Female and missing groups combined as per ONS Statistical Disclosure guidelines, missing category <10 in each group.
[c] Groups combined as per ONS Statistical Disclosure guidelines as all cells <10.
[d] Missing counts between 1 and 9 suppressed as per ONS Statistical Disclosure guidelines.
EYPP: Early Years Pupil Premium; EAL: English as an Additional Language; SEND: Special Education Needs and Disability; ONS: Office for National Statistics.

Analysis

Summary of raw scores

Outcome scores are summarised in Table 4. All 1,163 pupils for whom EYFSP data could be matched had a valid CL summary score; the mean score was 6.45 (SD 1.51) in the intervention group and 6.32 (SD 1.63) in the control.

All 1,163 pupils had a valid summary PSED score; the mean score was 6.33 (SD 1.28) in the intervention group and 6.20 (SD 1.41) in the control.

A higher proportion of pupils achieved a GLD in the EYFSP in the intervention group (n = 471, 81.3%) than the control group (n = 451, 77.2%).

Table 4: Summary of raw outcome scores from EYFSP for longitudinal analysis

Variable	Intervention group (n = 579)	Control group (n = 584)	Overall (n = 1,163)
'Communication and Language' (CL) area of learning from EYFSP			
Listening and attention ELG	**N (%)**	**N (%)**	**N (%)**
1 = Emerging	49 (8.5)	67 (11.5)	116 (10.0)
2 = Expected	386 (66.7)	380 (65.1)	766 (65.9)
3 = Exceeding	144 (24.9)	137 (23.5)	281 (24.2)
Understanding ELG	**N (%)**	**N (%)**	**N (%)**
1 = Emerging	46 (7.9)	73 (12.5)	119 (10.2)
2 = Expected	388 (67.0)	374 (64.0)	762 (65.5)
3 = Exceeding	145 (25.0)	137 (23.5)	282 (24.2)
Speaking ELG	**N (%)**	**N (%)**	**N (%)**
1 = Emerging	47 (8.1)	67 (11.5)	114 (9.8)
2 = Expected	421 (72.7)	397 (68.0)	818 (70.3)
3 = Exceeding	111 (19.2)	120 (20.5)	231 (19.9)
	N, Mean (SD)	**N, Mean (SD)**	**N, Mean (SD)**
CL summary score	579, 6.4 (1.5)	584, 6.3 (1.6)	1163, 6.4 (1.6)
'Personal, Social and Emotional Development' (PSED) area of learning from EYFSP			
Self-confidence and self-awareness ELG	**N (%)**	**N (%)**	**N (%)**
1 = Emerging	38 (6.6)	59 (10.1)	97 (8.3)
2 = Expected	441 (76.2)	422 (72.3)	863 (74.2)
3 = Exceeding	100 (17.3)	103 (17.6)	203 (17.5)
Managing feelings and behaviour ELG	**N (%)**	**N (%)**	**N (%)**
1 = Emerging	40 (6.9)	58 (9.9)	98 (8.4)
2 = Expected	441 (76.2)	438 (75.0)	879 (75.6)

3 = Exceeding	98 (16.9)	88 (15.1)	186 (16.0)
Making relationships ELG	**N (%)**	**N (%)**	**N (%)**
1 = Emerging	31 (5.4)	54 (9.2)	85 (7.3)
2 = Expected	448 (77.4)	432 (74.0)	880 (75.7)
3 = Exceeding	100 (17.3)	98 (16.8)	198 (17.0)
	N, Mean (SD)	**N, Mean (SD)**	**N, Mean (SD)**
PSED summary score	579, 6.3 (1.3)	584, 6.2 (1.4)	1163, 6.3 (1.3)
	N (%)	**N (%)**	**N (%)**
Achieving a good level of development	471 (81.3)	451 (77.2)	922 (79.3)

Primary longitudinal analysis

EYFSP Communication and Language summary score

Pre-test Core Language Standard Score data and EYFSP CL score were available for 1,161 pupils (intervention group n = 579, control group n = 582) across all 102 nurseries. These were included in the primary longitudinal analysis model.

There was no evidence of a difference in CL score between the two groups (adjusted mean difference 0.09, 95% CI: 0.15 to 0.32, p = 0.47). The estimated effect size is small at 0.06 (95% CI: -0.10 to 0.20) and equates to approximately one additional month's progress (Table 5).

The total variance used to calculate the effect size, obtained from a model which did not adjust for pre-test score or the minimisation factor, was 2.48 (Table 6)—the sum of 2.18 (random variation between pupils, within-cluster variance) and 0.30 (heterogeneity between nurseries, between-cluster variance).

Table 5: Primary and secondary analysis for the longitudinal follow-up

Outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges' g (95% CI)	p-value
	n (missing)	Mean (95% CI)	N (missing)	Mean (95% CI)			
Communication and Language	579 (16)	6.4 (6.3, 6.6)	584 (26)	6.3 (6.2, 6.5)	1161 (579; 582)	0.06 (-0.10, 0.20)	0.47
Personal, Social and Emotional Development	579 (16)	6.2 (6.1, 6.3)	584 (26)	6.3 (6.2, 6.4)	1161 (579; 582)	0.07 (-0.09, 0.22)	0.39
Dichotomous outcome		**N (%)**		**N (%)**		**Odds ratio (95% CI)**	
Good level of development	579 (16)	471 (81.4)	584 (26)	451 (77.2)	1161 (579; 582)	1.28 (0.92, 1.78)	0.14

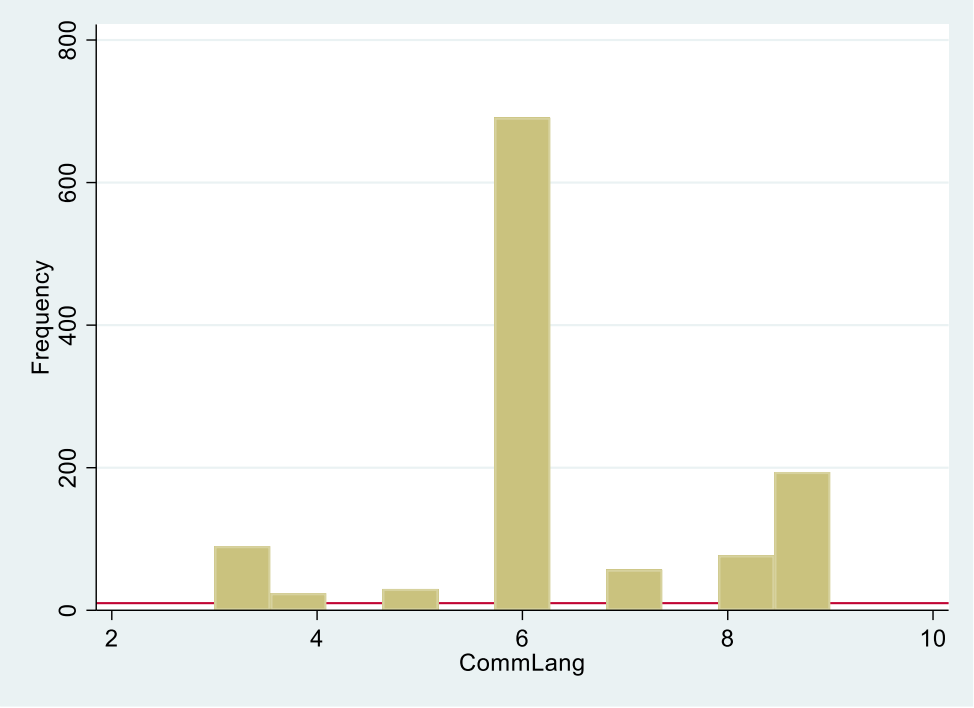
Table 6: Effect of size estimation

Outcome	Unadjusted differences in means (95% CI)	Adjusted differences in means (95% CI)	Intervention group		Control group		Pooled Variance
			n (missing)	Variance of outcome	n (missing)	Variance of outcome	
Communication and Language	0.13 (-0.06, 0.31)	0.09 (-0.15, 0.32)	579 (16)	2.28	584 (26)	2.66	2.48
Personal, Social and Emotional Development	0.12 (-0.03, 0.28)	0.09 (-0.12, 0.30)	579 (16)	1.63	584 (26)	2.00	1.81

Although the distribution of the CL summary score was not normal (Figure 1) and demonstrates that about a quarter of pupils scored in the higher range of eight or nine, the residuals from the analysis model showed a close fit to a normal distribution (Figure 2) and so the model assumptions were not violated.

The nursery-level ICC for the post-test CL score is 0.09 (95% CI: 0.06 to 0.15). The correlation between CL score and pre-test Core Language Standard Score is 0.43.

Figure 1: Histogram of Communication and Language summary score (the red horizontal line represents a frequency of 10 to demonstrate that no bar of the histogram has an underlying cell count of fewer than 10, to prevent statistical disclosure)



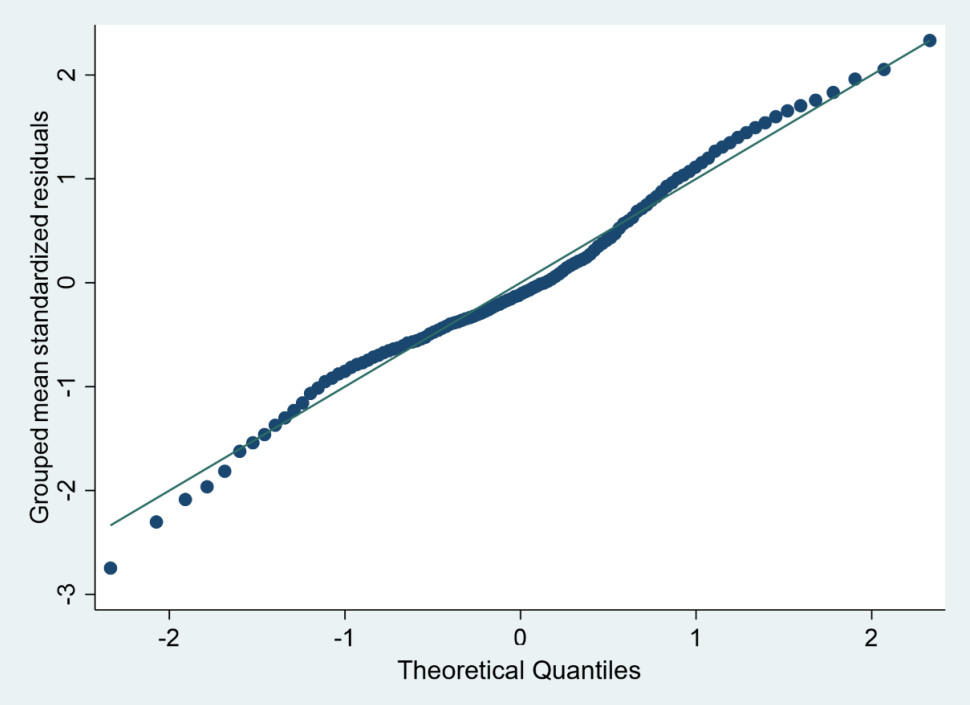


Figure 2: QQ plot of residuals from the mixed-effect linear regression model for the Communication and Language summary score, indicating a close fit to the normal distribution (each point represents the average residual for a group of 10 (and one group of 13) pupils to prevent statistical disclosure)

EYFSP Personal, Social and Emotional Development

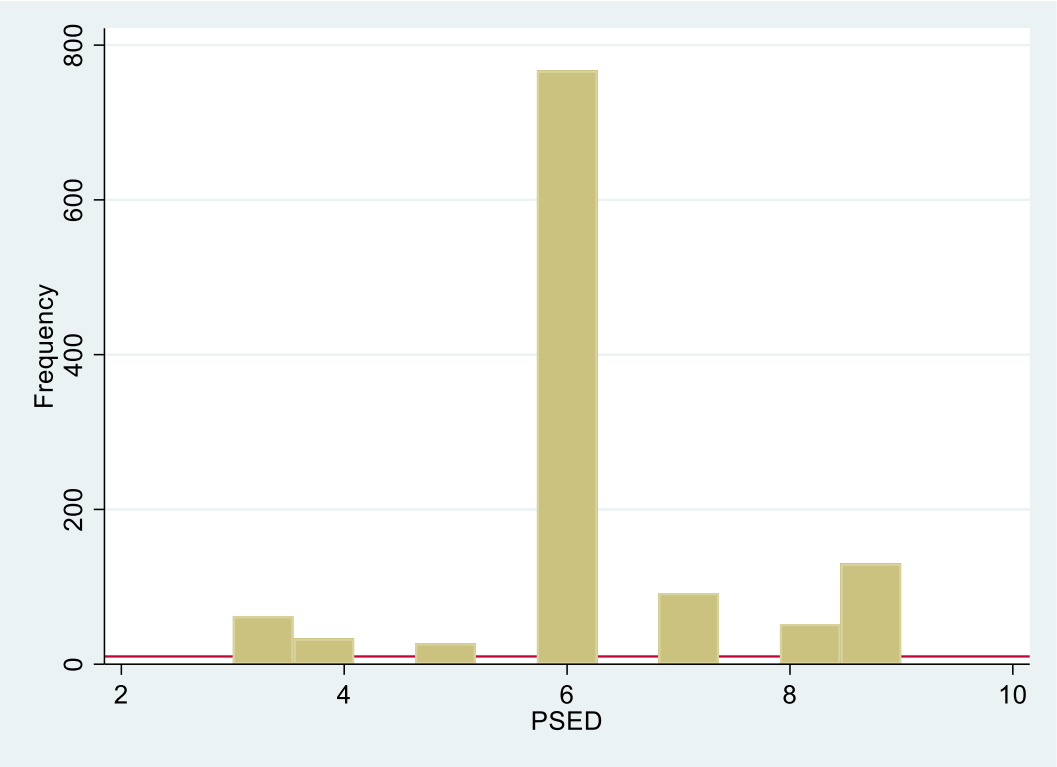
There was no evidence of a difference in PSED score between the two groups (adjusted mean difference 0.09, 95% CI: -0.12 to 0.30, p = 0.39). The estimated effect size is small at 0.07 (95% CI: -0.09 to 0.22) and equates to approximately one additional month's progress (Table 5).

The total variance used to calculate the effect size, obtained from a model which did not adjust for pre-test score or the minimisation factor, was 1.81 (Table 6)—the sum of 1.57 (random variation between pupils, within-cluster variance) and 0.24 (heterogeneity between nurseries, between-cluster variance).

Although the distribution of the PSED summary score was not normal (Figure 3) and demonstrates that about a fifth of pupils scored in the higher range of eight or nine, the residuals from the analysis model showed a close fit to a normal distribution (Figure 4) and so the model assumptions were not violated.

The nursery-level ICC for the post-test PSED score is 0.10 (95% CI: 0.06 to 0.15). The correlation between PSED score and pre-test Core Language Standard Score is 0.38.

Figure 3: Histogram of PSED summary score (the red horizontal line represents a frequency of 10 to demonstrate that no bar of the histogram has an underlying cell count of fewer than 10, to prevent statistical disclosure)



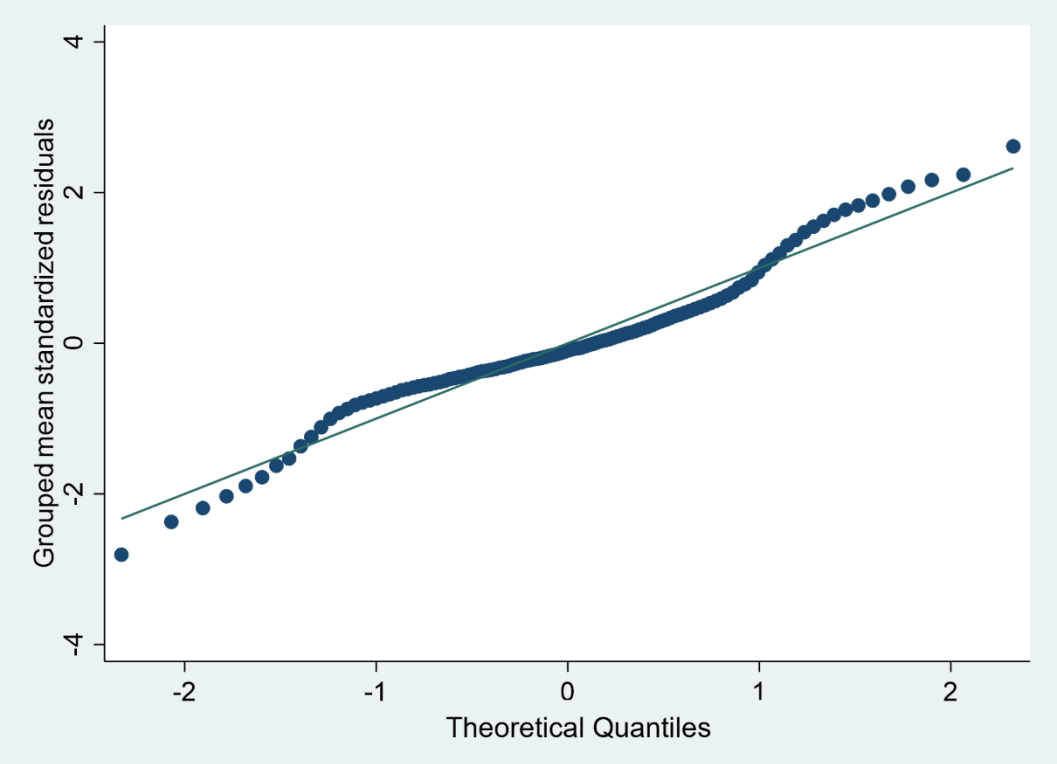


Figure 4: QQ plot of residuals from the mixed-effect linear regression model for the PSED summary score, indicating a close fit to the normal distribution (each point represents the average residual for a group of 10 (and one group of 13) pupils to prevent statistical disclosure)

EYFSP Good Level of Development

There was no evidence that pupils in the intervention group were more likely to have achieved a GLD (OR 1.28, 95% CI: 0.92 to 1.78, p = 0.14—Table 5). This equates to an approximate Hedges' g effect size of 0.15 (95% CI: -0.05 to 0.35) or two months' additional progress.

Subgroup analysis

There was no evidence that the intervention effect differs for the levels of EYPP (interaction effect p = 0.75), or EAL (interaction effect p = 0.96). However, there was evidence that the intervention effect differed by gender (interaction effect p = 0.04). Results of the analyses run separately in the two gender subgroups can be found in Tables 7 and 8. The adjusted mean difference in CL score amongst males is 0.25 (95% CI: -0.06 to 0.56, p = 0.11), which favours the intervention group (Hedges' g effect size 0.10, 95% CI: -0.02 to 0.21, which equates to approximately two months' additional progress), whereas amongst females it was -0.10 (95% CI: -0.35 to 0.15, p = 0.43), which favours the control group (Hedges' g effect size -0.04, 95% CI: -0.15 to 0.07, which equates to zero additional month's progress).

Table 7: Gender subgroup analysis

Communication and Language outcome	Raw means				Effect size		
	Intervention group		Control group		n in model (intervention; control)	Hedges' g (95% CI)	p-value
	n (missing)	Mean (95% CI)	N (missing)	Mean (95% CI)			
Males	284 (0)	6.33 (6.15, 6.51)	281 (0)	6.05 (5.85, 6.25)	565 (284; 281)	0.10 (-0.02, 0.21)	0.11
Females	* (0)	6.55 (6.37, 6.72)	* (0)	6.57 (6.40, 6.75)	583 (289; 294)	-0.04 (-0.15, 0.07)	0.43

* N not included to avoid statistical disclosure for 'missing' group as per Table 3.

Table 8: Effect size estimation within male and female subgroups

Outcome	Unadjusted differences in means (95% CI)	Adjusted differences in means (95% CI)	Intervention group		Control group		Pooled Variance
			n (missing)	Variance of outcome	n (missing)	Variance of outcome	
Males	0.28 (0.01, 0.55)	0.25 (-0.06, 0.56)	284 (0)	2.30	281 (0)	2.96	2.63
Females	-0.03 (-0.27, 0.22)	-0.10 (-0.35, 0.15)	* (0)	2.25	* (0)	2.29	2.26

* N not included to avoid statistical disclosure for 'missing' group as per Table 3.

Conclusion

Table 9: Key conclusions

Key conclusions
1. Pupils who participated in EasyPeasy were more likely to achieve a 'good level of development' as defined by the EYFSP, equating to two months' of additional progress, on average, compared to children in other schools.
2. EYFSP assessments implemented 12-months after receiving the intervention suggest that pupils in EasyPeasy schools made, on average, one month of additional progress in Communication and Language, compared to children in non-EasyPeasy schools.
3. Pupils who participated in EasyPeasy made the equivalent of one month of additional progress in PSED, on average, compared to children in other schools.
4. Boys in EasyPeasy schools made the equivalent of two months' additional progress in Communication and Language, on average, compared to boys in other schools. This result was not seen in girls who made the equivalent of no months' progress in the same area of learning.

Interpretation

The EasyPeasy intervention aimed to improve engagement between parents and their young children aged three to four years old to advance their cognitive development, self-regulation, and language and communication skills. This longitudinal analysis found that participation in the EasyPeasy intervention led to a small improvement in language skills at the age of four to five years old; participants in the EasyPeasy group made an estimated one month's additional progress as measured by the EYFSP CL, although this result was not statistically significant (effect size 0.06, 95% CI: -0.10 to 0.20). These results are similar to the primary and secondary language-related outcomes measured immediately following the EasyPeasy intervention (Robinson-Smith et al., 2019), where participation in the EasyPeasy intervention had a small positive effect on language development (when measured using a composite summary language score comprising the CELF-Preschool 2 UK sub-tests 'sentence structure', 'word structure', and 'expressive vocabulary'); however, this did not equate to any additional months' progress. Furthermore, secondary analysis of the CELF-Preschool 2 UK 'word structure' and 'concepts of following directions' language subscales showed small, non-statistically significant effects in favour of participants in the EasyPeasy group, equating to a month or less of progress.

This longer-term evaluation was planned and proposed in the main protocol to be conducted regardless of the results of the main evaluation. We could not have known that little change would have been seen at the initial follow-up when planning this longer-term follow-up. However, it was important to consider whether the effects of the intervention might have become more evident in the longer term over and above those captured at the time of the initial follow-up or, had there been a significant difference at the initial follow-up, whether this had been maintained over the longer term.

Within the longitudinal subgroup analysis, participating boys in the EasyPeasy group were observed to have made an estimated two months' additional progress as measured by the EYFSP CL subscale scores relative to boys in the control group (effect size 0.10, 95% CI: -0.02 to 0.21). For girls, it was observed that there was no evidence of a benefit to EYFSP CL score in the EasyPeasy group relative to the control group (effect size -0.04 (95% CI: -0.15 to 0.07). Subgroup analysis conducted within the main evaluation reported that girls' language skills, measured shortly after intervention delivery, were slightly better than those of boys (Robinson-Smith et al., 2019, p.41). This finding is corroborated by wider literature indicating that boys are more likely to have poorer early language skills in comparison to girls (Moss, Washbrook and Eagle, 2016), which would suggest that language interventions such as this one would have a greater impact on boys' language skills: this. We can postulate that boys are likely to benefit more from effective interventions that aim to improve early language in comparison to girls, as boys' language skills are poorer to start with, which could explain the longitudinal results presented here. However, early language gender differences are, in part, attributed to parental interaction, with the early home learning environment reported to be a contributing factor to the gender gap in language by the age of five (Moss, Washbrook and Eagle, 2016). The way in which parents or carers interact with their children often depends on the child's gender (Siraj-Blatchford and Sammons, 2004) and research has shown that boys are more likely to experience a lower-quality home learning environment in comparison to girls (Siraj-Blatchford and Siraj-Blatchford, 2009). Within the main evaluation, researchers used the Home Observation and Measurement of Environment (HOME, Caldwell and Bradley, 1984) to obtain a systematic assessment of a child's home

environment. Here, albeit within a small subset of participants by design, significant improvements to the home learning environment were observed in parents receiving EasyPeasy (Robinson-Smith et al., 2019). Drawing on the results of the longitudinal analysis, the main evaluation, and wider literature, we can surmise that EasyPeasy may have improved participating boys' home learning environment and the quality of stimulation that parents or carers provided beyond intervention delivery, which resulted in the improved language skills observed within this longitudinal analysis. Such improvements may not have been observed amongst girls as their home learning environment was already of better quality than boys and so the intervention might have been similar to the home environment already experienced by girls.

There was no moderation of effects between children with different Early Years Pupil Premium (EYPP) or EAL status in subgroup analyses. These results are consistent with the findings of the main evaluation, where the effect of the EasyPeasy intervention on post-test Core Language Standard Score was not seen to be substantially altered by having EYPP status or having EAL (see p.41 and p.61 of Robinson-Smith et al., 2019).

This longitudinal follow-up also investigated the effect of the EasyPeasy intervention on the EYFSP PSED subscale scores. Although not statistically significant, the observed effect size was positive but small, equating to one month's additional progress for the intervention group (effect size 0.07, 95% CI: -0.09 to 0.22). The main evaluation (Robinson-Smith et al., 2019) found small increases in favour of the EasyPeasy group in sociability, cognitive self-regulation, and emotional self-regulation compared to the control group, with effects on externalising, internalising, and prosocial behaviour and behavioural self-regulation favouring the control group (all not statistically significant). Other previous smaller studies of EasyPeasy found a positive effect on children's cognitive self-regulation (Jelley, Sylva and Karemaker, 2016; Jelley and Sylva, 2018). It is important to note the key differences between these studies in relation to the timing and method of follow-up: Robinson-Smith et al., (2019), Jelley, Sylva and Karemaker (2016), and Jelley and Sylva (2018) collected outcome data shortly following the delivery of the intervention, whereas the data for this longitudinal follow-up was collected at least one year after the intervention had ended. Furthermore, the outcome measures used here (EYFSP) and those used within the main evaluation were objectively reported by participating children's teachers as opposed to the parent/carer-reported measures used within Jelley, Sylva and Karemaker (2016) and Jelley and Sylva (2018). Together, these results show a mixed picture but suggest that the intervention may contribute small improvements over time to some aspects of PSED for some children.

Participants in the EasyPeasy group were slightly more likely to achieve a 'good level of development', although this result was not statistically significant. In summary, this longitudinal analysis found small, positive effects of the intervention in all outcomes; therefore, it would suggest that the EasyPeasy intervention benefited some children, in some areas, following 'soak time' of the intervention. Such longer-term benefits to some children's cognitive development, self-regulation, and language and communication skills may also be related to the level of parental engagement with the EasyPeasy intervention. The implementers of EasyPeasy were unable to provide such data to the evaluation team during the main evaluation, therefore it is not possible to explore the long-term impact of parental engagement on children's outcomes at this point. While the EEF's Teaching and Learning Toolkit reports effective parental engagement approaches can positively influence children's progress, how the impact of such interventions differ by gender is not currently considered.

Limitations

Although some small differences were observed, it is possible that the EYFSP lacks sensitivity to detect change between the EasyPeasy and control groups at a longer-term follow-up. Each Early Learning Goal is only scored within three grades (1, 'emerging', 2, 'expected', and 3, 'exceeding') so the sum of the three ELGs for each of the Communication and Language and PSED summary scores were between three and nine. Therefore, there is limited granularity to differentiate between the two groups. This limitation of the use of the EYFSP as an outcome will be exacerbated under the new EYFSP framework since this has removed the 'exceeding' option.[6] There are no other national, routinely collected tests that assess attainment at primary school before the Key Stage 1 tests at the end of Year 2. The reception Baseline Assessment is a statutory assessment that was introduced in September 2021 to provide a starting point for children to measure their progress through primary school, however, even had this test been available for our population,

[6]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1024319/Early_years_foundation_stage_profile_handbook_2022.pdf

it would have been measured too early to provide a longer-term outcome. A suitable external assessment would, therefore, need to be selected and used if we wanted to repeat this longer-term follow-up, which would increase the time and cost burden.

Since we did not see an interaction effect for gender in the main evaluation in relation to the primary outcome of CELF Core Language Score, we cannot hold too much confidence in the findings from the subgroup analysis in this longitudinal follow-up; it may be a chance finding and would need to be replicated in further studies.

Future research

Further research would be needed to replicate the findings and investigate the possible reasons for the difference observed that, in the longer term, boys tended to benefit from this specific home learning intervention more than girls. Any future research should focus on including an objective measure of parental engagement with the intervention itself. An alternative to the EYFSP, which could measure the required domains with more granularity, should be considered or developed as an outcome measure.

ONS Disclaimer

This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates.

References

Caldwell, B. and Bradley, R. (1984) *Home Observation for Measurement of the Environment (HOME) (revised edn)*, Little Rock, AR: University of Arkansas, Little Rock.

Fairhurst, C. (2018) 'Statistical Analysis Plan: EasyPeasy' (amended), London: Education Endowment Foundation. https://d2tic4wvo1iusb.cloudfront.net/documents/pages/projects/EasyPeasy_SAP_final.pdf?v=1630925488

Howard, S. J. and Melhuish, E. (2016) 'An Early Years Toolbox for Assessing Early Years Executive Function Language, Self-Regulation, and Social Development: Validity, Reliability, and Preliminary Norms', *Psychoeducational Assessment*, 35 (3), pp.255–275.

Jelley, F., Sylva, K. and Karemaker, A. (2016) 'EasyPeasy Parenting App: Findings from an Efficacy Trial on Parent Engagement and School Readiness Skills', London: The Sutton Trust. https://www.suttontrust.com/wp-content/uploads/2019/12/EasyPeasy-Evaluation_FINAL.pdf

Jelley, F. and Sylva, K. (2018) EasyPeasy Evaluation in Newham: Findings from the Sutton Trust Parental Engagement Fund (PEF) Project', London: The Sutton Trust. https://www.suttontrust.com/wp-content/uploads/2019/12/EasyPeasyNewham-FINAL.pdf

Moss, G., Washbrook, L. and Eagle, S. (2016) 'Understanding the Gender Gap in Literacy and Language Development, 2016', Bristol Working Papers in Education 01, University of Bristol Graduate School of Education: https://www.bristol.ac.uk/media-library/sites/education/documents/bristol-working-papers-in-education/Understanding%20the%20Gender%20Gap%20working%20paper.pdf

Robinson-Smith, L., Merrell, C., Stothard, S., Torgerson, C., Menzies, V. and Cramman, H. (2018) 'Independent Evaluation of the EasyPeasy Programme: A Two-Arm 5 Month Randomised Controlled Trial. Trial Protocol, version 2': https://d2tic4wvo1iusb.cloudfront.net/documents/pages/projects/Round_11_-_EasyPeasy_protocol_amended_20180508.pdf?v=1630925487.

Robinson-Smith, L. and Fairhurst, C. (2019) 'Statistical Analysis Plan Longitudinal Follow-Up: EasyPeasy', London: Education Endowment Foundation. https://d2tic4wvo1iusb.cloudfront.net/documents/projects/EasyPeasy_Longitudinal_analysis_plan.pdf?v=1630925488

Robinson-Smith, L., Menzies, V., Cramman, H., Wang, Y., Fairhurst, C., Hallett, S., Beckmann, N., Merrell, C., Torgerson, C., Stothard, S. and Siddiqui, N. (2019) 'EasyPeasy: Learning Through Play, Evaluation Report', London: Education Endowment Foundation. https://d2tic4wvo1iusb.cloudfront.net/documents/projects/EasyPeasy.pdf?v=1630925486
https://educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/EasyPeasy.pdf

Siraj-Blatchford, I. and Sammons, P. (2004) 'Social Mobility: The Role of Pre-Schools and Parents, Evidence from the UK – DfES Funded EPPE study', paper given at HM Treasury Conference on Social Mobility, London, 30 March.

Siraj-Blatchford, I and Siraj-Blatchford, J. (2009) 'Improving Children's Attainment Through a Better Quality of Family Based Support for Early Learning', Early Years Research Review, The Centre for Excellence and Outcomes in Children and Young People's Services.

What Works Clearinghouse (n.d.) 'Procedures Handbook, Version 4.0', Washington DC: U.S Department for Education, Institute of Education Sciences: https://ies.ed.gov/ncee/wwc/docs/referenceresources/wwc_procedures_handbook_v4.pdf

This document is available for download at https://educationendowmentfoundation.org.uk

Education Endowment Foundation

The Education Endowment Foundation
5th Floor, Millbank Tower
21–24 Millbank
London
SW1P 4QP

https://educationendowmentfoundation.org.uk
@EducEndowFoundn
Facebook.com/EducEndowFoundn