RAISE RESILIENCE

A pilot study of Bounce Forward's parenting programme

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Chloe Lowry, MSc

Institute of Education,
University College London

Executive Summary

This report presents a pilot evaluation of the *Raise Resilience* programme, a six-week online course designed by the charity Bounce Forward (https://bounceforward.com), aimed at enhancing emotional resilience in parents and their children. The programme focuses on teaching emotion regulation strategies to parents, with the dual goal of improving their own emotional well-being and enabling them to better support their children's psychosocial development.

The study employed a robust short-term longitudinal pre-test/post-test design, collecting data through standardized questionnaires before the programme and at a 12-week follow-up. The participant cohort, primarily consisting of female, married, Caucasian parents with degree-level education, was assessed for changes in their use of cognitive reappraisal and expressive suppression strategies, the emotional support they provide to their children, and their children's psychosocial difficulties.

Key findings include:

- Parents demonstrated a significant increase in their use of cognitive reappraisal, a strategy for positively reframing emotional situations, and a marginal decrease in expressive suppression, which involves inhibiting emotional expression.
- Parents' ability to support their children's adaptive emotion regulation improved post-intervention. However, no significant change was observed in their use of maladaptive emotion support strategies.
- Children of participating parents, specifically those with initially high levels of psychosocial difficulties, showed a substantial reduction in these difficulties post-intervention.

These preliminary findings suggest that the *Raise Resilience* programme has the potential to positively impact family emotional health, especially for children with higher initial psychosocial challenges. However, the results should be interpreted with caution due to the pilot nature of the study and the notable attrition rate.

Overall, the programme shows promise as a cost-effective tool for enhancing emotional resilience in families. Further research with a more diverse and larger participant pool, and a control group, is recommended to validate these preliminary findings.

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Introduction

Bounce Forward's six-week online parenting programme, *Raise Resilience*, aims to cultivate psychological resilience in parents and their children, with a significant focus on emotion regulation—managing and responding to emotional experiences effectively. This pilot study evaluates this brief psychoeducational programme's capacity to enhance parents' emotion regulation and improve children's psychosocial wellbeing.

The programme's emphasis on improving parents' emotion regulation is crucial, as effective self-regulation enables parents to provide more supportive responses to their children's emotional states (Hajal & Paley, 2020; Zimmer-Gembeck et al., 2022). These responses lay the foundation for children's own emotion regulation abilities (Gottman et al., 1996; Ratliff et al., 2022). Interventions that equip parents to guide their children in adopting positive emotion regulation strategies have shown to bolster socioemotional outcomes (Havighurst et al., 2009; Kehoe et al., 2014). Notably, the series of live *Raise Resilience* webinars can be delivered for only £19 per person, meaning that even modest improvements parents and children's emotional health could make the programme a worthwhile investment.

Previous qualitative research on an in-person iteration of *Raise Resilience* reported positive participant outcomes, with participants describing improvements in their emotion regulation, metacognitive awareness, and parental self-efficacy (Harris, 2020). While inferential statistics were not applied, feedback via the Warwick-Edinburgh Mental Wellbeing Scale suggested enhanced participant wellbeing post-intervention.

Building on these findings, this pilot study provides a preliminary quantitative assessment of the live online version of *Raise Resilience*. It explores changes in parents' own emotion regulation, the emotion support they provide to their children, and their children's psychosocial functioning.

It is hypothesized that six weeks after completing the programme, compared to baseline measures:

1. Parents will make more use of cognitive reappraisal (reassessing a situation to change its emotional impact) and less use of expressive suppression (inhibiting the outward expression of emotion).
2. Parents will offer more adaptive and less maladaptive emotion support to their children.
3. Children will exhibit a reduction in psychosocial difficulties.

This research also aims to shed light on the nature and extent of children's difficulties and on their parents' experiences post-intervention.

The study was conducted independently as part of a dissertation project for a Masters' degree at the Institute of Education at University College London. The content reflects the author's own analysis of the study data and should not be considered representative of Bounce Forward's views.

Method

Design

A short-term longitudinal pre-test/post-test design was employed to evaluate the *Raise Resilience* parenting programme's potential impact. Standardized questionnaires were administered before the programme and at a 12-week follow-up (six weeks post-intervention). The design aimed to detect early programme-related shifts in parents' emotion regulation, the emotion support they provide to their children, and their children's psychosocial adjustment.

Participants were thoroughly briefed on the study's objectives and procedures, ensuring informed consent. The project adhered to ethical guidelines and received approval from the Institute of Education Research Ethics Committee.

Programme Description

Raise Resilience is a psychoeducational programme based on cognitive-behavioural principles. It aims to enhance both parental and child resilience by fostering emotional awareness, adaptive emotion regulation strategies, effective communication, and a growth mindset. It consists of six one-hour live webinars for parents, accompanied by supplementary activities. For example, parents are taught about the Antecedents-Behaviour-Consequences (ABC) model (Ellis, 1962) during a live webinar. They are then encouraged to enhance their own and their children's cognitive reappraisal through making use of age-appropriate worksheets outside the session.

Participants

All parents enrolled in any of Bounce Forward's five *Raise Resilience* programmes in Spring 2022 were invited to take part in the study. Four of these programmes were funded by Kent or Hertfordshire local councils and open to all resident parents; these parents comprised 96.8% of the sample. The remaining programme was an open course, paid for by individual parents. For each survey, responses were included in the analysis if parents completed at least the first two measures. Ninety-five parents responded to the pre-intervention survey, forming the initial sample. However, the research encountered retention challenges, with only 25 of the original participants undertaking the post-intervention survey. Considering the substantial attrition, comparative analyses between Completers and Non-completers were conducted to investigate any potential biases, with findings detailed in the Results section.

Detailed demographics for the full sample and for Completers are presented in Table 1. The initial cohort was predominantly female, married, and Caucasian, with an average of 2.2 children. Most held educational qualifications at the degree level or above. Target children were evenly split by gender and ranged from 4 to 16 years with an average age of 9.9 years.

Table 1 Demographic characteristics for full sample and for Completers

	Full sample (N = 95)	Completers (N = 25)
Gender		
Male	10 (10.5%)	2 (8.0%)
Female	85 (89.5%)	23 (92.0%)
Age		
18-24	1 (1.1%)	0 (0%)
25-34	9 (9.5%)	1 (4.0%)
35-44	48 (50.5%)	15 (60.0%)
45-54	34 (35.8%)	9 (36.0%)
55 and above	3 (3.2%)	0 (0%)
Marital status		
Single	9 (9.5%)	3 (12.0%)
Living with partner	9 (9.5%)	2 (8.0%)
Married	67 (70.5%)	16 (64.0%)
Divorced	9 (9.5%)	4 (16.0%)

Widowed	0 (0%)	0 (0%)
Number of children		
One child	16 (16.8%)	4 (16.0%)
Two children	57 (60%)	14 (56.0%)
Three children	14 (14.7%)	6 (24.0%)
Four children	5 (5.3%)	1 (4.0%)
Five children	2 (2.1%)	0 (0%)
Six or more children	1 (1.1%)	0 (0%)
Ethnicity		
White/Caucasian	86 (90.5%)	24 (96.0%)
Asian/Asian British	4 (4.2%)	1 (4.0%)
Black/African/Caribbean/Black British	1 (1.1%)	0 (0%)
Mixed/Multiple ethnic groups	2 (2.1%)	0 (0%)
Other ethnic group	2 (2.1%)	0 (0%)
Education level		
No formal schooling	1 (1.1%)	0 (0%)
Secondary school pre-16	2 (3.2%)	1 (4.0%)
Education post-16	26 (27.4%)	7 (28.0%)
Undergraduate degree	42 (44.2%)	11 (44.0%)
Postgraduate degree	23 (24.2%)	6 (24.0%)
Target child age		
Mean (SD)	9.87 years (3.0)	9.28 years (2.9)
Target child gender		
Male	48 (50.5%)	12 (48.0%)
Female	47 (49.5%)	13 (52.0%)

Measures

All the measures described below were included in both surveys, alongside the Emotion Beliefs Questionnaire (EBQ) (Becerra et al., 2020). The results of the EBQ were discussed at length in the dissertation (available upon request) but are omitted here in favour of focussing on the variables with established links to children's socioemotional functioning.

Emotion Regulation Questionnaire (ERQ)

The ERQ (Gross & John, 2003) is a commonly-used self-report questionnaire with strong psychometric properties that is used to assess respondents' use of Cognitive Reappraisal and Expressive Suppression. Parents responded to statements about their use of Cognitive Reappraisal (e.g. "When I want to feel more positive emotion, I change the way I'm thinking about the situation") and Expressive Suppression (e.g. "I keep my emotions to myself") on a 7-point Likert scale. Both the Cognitive Reappraisal (α = 0.82; α = 0.74) and Expressive Suppression (α = 0.75; α = 0.82) scales were found to have good internal consistency at baseline and follow-up respectively.

Parental Assistance with Child Emotion Regulation (PACER)

PACER (Cohodes et al., 2021) is a new self-report questionnaire with promising psychometric properties which assesses the ways parents help their child regulate negative emotions. Parents responded to statements about helping their child engage in one of ten emotion regulation strategies on a 7-point Likert scale (e.g. problem solving: "I help my child think of solutions to their problems"; distraction: "I help my child find ways to distract themselves from their negative feelings"). Five of these strategies are considered generally adaptive (acceptance, problem-solving, reappraisal, social support search, and venting) and five generally maladaptive (avoidance, behavioural disengagement, distraction, suppression, and rumination) (Mancini et al., 2022). For the purposes of analysis, two amalgamated scales were created by summing the scores of the adaptive and maladaptive strategies respectively. Both new scales, Adaptive Emotion Support (α = 0.94; α = 0.96) and Maladaptive Emotion Support (α = 0.84; α = 0.86), exhibited strong internal consistency at baseline and follow-up respectively.

Strengths and Difficulties Questionnaire (SDQ)

The SDQ (Goodman, 1997, 1999) is a commonly used measure of child psychosocial difficulties with acceptable psychometric properties (Bergström & Baviskar, 2021). For this study, the parental report SDQ with the Impact Supplement was used, with the post-intervention questionnaire employing the follow-up version. Parents with multiple children were asked to focus on the child they were most concerned about at the time of starting the programme. For the main SDQ, parents rated the extent to which a set of statements was true of the target child's behaviour over the preceding period (e.g. "often lies or cheats", "constantly fidgeting or squirming") on a 3-point scale (0 = *not true*, 2 = *certainly true*). This generates five subscales: Emotional Problems, Peer Problems, Conduct Problems, Hyperactivity, and Prosocial Behaviour. The items from the first four of these subscales were summed to generate the Total Difficulties score, which exhibited good internal consistency at both baseline (α = 0.82) and follow-up (α = 0.72). For the Impact Supplement, parents reported on the existence of psychosocial difficulties, their chronicity, their impact on the child, and their overall effect on the family. The answers regarding the extent of the impact of the difficulties on different aspects of the child's life (e.g. home life, classroom learning) are summed to generate an Impact score ranging between 0-10. Based on data from a large population-based UK survey, scores for all the SDQ scales can be categorized into four bands: 'close to average' (80% of population), 'slightly raised' (10% of population), 'high' (5% of population), and 'very high' (5% of population) (Youth In Mind, 2016).

Additional Study-specific Questions

Alongside these established measures, the follow-up survey included four study-specific supplementary questions designed to assess the practical application of the programme content by the participating parent and, if applicable, by their co-parenting partner. These items addressed (1) the participants' implementation of the programme's ideas and techniques, (2) the existence of a co-parent, (3) the co-parent's attendance in the programme sessions, and (4) the co-parent's implementation of programme strategies.

Procedure

One week before their programme began, the researcher contacted interested parents by email. Parents were invited to read the online study information and complete the first of two online questionnaires, with the second to be completed six weeks after their programme ended. Both questionnaires included the aforementioned measures, took approximately 15-20 minutes to complete, and were administered using Qualtrics. In line with the Institute of Education's dissertation guidelines, participants were not compensated for their involvement in this study.

Analytic Strategy

Data were analysed using SPSS Statistics 27. Prior to in-depth analysis, the main study variables (Cognitive Reappraisal, Expressive Suppression, Adaptive Emotion Support, Maladaptive Emotion Support, and Child Total Difficulties) were transformed from ordinal to interval format to enable parametric testing.

During the data preparation phase, it was identified that one item from the Conduct Problems subscale of the SDQ (Item 22) was uniformly missing due to an administrative oversight. Person-mean imputation was employed to address this, with individual means for the completed Total Difficulties items substituted for the missing value for each participant. Imputation from Total Difficulties rather than from the Conduct Problems subscale was chosen due to the low internal consistency of the subscale ($\alpha = 0.58$) in comparison to that of the Total Difficulties score ($\alpha = 0.82$). This was deemed suitable considering the study's focus on the Total Difficulties scale, with the SDQ subscales only used for descriptive purposes. Consequently, the Conduct Problems subscale must be viewed as indicative only. Robustness checks were performed by conducting all analyses with both the original and imputed data.

Descriptive statistics provided an overview of the data, complemented by histograms and box plots for visual examination of distribution. Shapiro-Wilk tests were conducted to assess the normality of the variables.

A series of planned paired samples t-tests were used to compare baseline and follow-up scores for the main study variables. Given the exploratory nature of this pilot study and the presence of distinct, theoretically-driven hypotheses for each analysis, the decision was made not to adjust for familywise error rate. Although such adjustments are standard in confirmatory research to mitigate the risk of Type I errors across multiple comparisons, they may mask significant findings in the context of a pilot study where the primary goal is to explore potential effects. Consistent with the directional predictions of the hypotheses—that the intervention would lead to improvements—one-tailed t-tests were employed. For all other analyses, two-tailed tests were utilized.

A bimodal distribution was observed in baseline Child Total Difficulties scores among Completers, leading to the identification of two subgroups, each with 12 participants: Typical SDQ scores (<14) and Raised SDQ scores (≥14). The former category aligns with the 'close to average' category of the four-band SDQ scoring system; the latter category encompasses the remaining bands. Preliminary observations indicated a notable change in the average Child Total Difficulties score from baseline to follow-up in the Raised SDQ group, in contrast to the Typical SDQ group. A mixed ANOVA was conducted to further investigate the programme's differential impact on these subgroups.

To assess the impact of participant dropout, statistical comparisons between Completers and Non-completers were made across the demographic variables (age, gender, ethnicity, marital status, education level, number of children, target child age and target child gender) and the main study variables at baseline.

To complement the quantitative findings and address the secondary aims of the study, detailed descriptive statistics are provided on children's psychosocial difficulties and on parents' post-intervention feedback. The former are derived from the SDQ and the SDQ Impact Supplement, the latter from the additional study-specific questions include in the follow-up questionnaire. The results are depicted descriptively in tables and through bar charts for clear interpretation. It should be noted that to enable average scores for the SDQ scales to be categorised using the four-band classification

system, decimals were rounded to the nearest integer. Additionally, it should be noted that mean Impact scores include zero scores for children whose parents reported no difficulties.

Results

Descriptive Statistics

Descriptive statistics for the main study variables for the full sample at baseline and for Completers at baseline and follow-up are presented in Table 2 and Table 3 respectively. An analysis comparing the baseline scores in the main study variables for Completers and Non-completers can be found in the Comparative Analyses section.

Table 2 Descriptive statistics for the main study variables for the full sample at baseline

Variable	*N* (% missing)	*M*	*SD*
Cognitive Reappraisal	95 (0.0%)	28.47	6.09
Expressive Suppression	95 (0.0%)	13.04	4.50
Adaptive Emotion Support	88 (7.4%)	137.56	18.30
Maladaptive Emotion Support	87 (8.4%)	94.70	14.81
Child Total Difficulties	94 (1.1%)	16.82	7.13

Table 3 Descriptive statistics for main study variables for Completers at baseline and follow-up

Variable	*N* (% missing)	*M*	*SD*
Cognitive Reappraisal			
Baseline	25 (0.0%)	28.84	5.73
Follow-up	25 (0.0%)	30.88	4.35
Expressive Suppression			
Baseline	25 (0.0%)	12.32	4.26
Follow-up	25 (0.0%)	11.44	3.71
Adaptive Emotion Support			
Baseline	25 (0.0%)	131.88	16.57
Follow-up	23 (8.0%)	137.35	17.54
Maladaptive Emotion Support			
Baseline	25 (0.0%)	92.00	14.02
Follow-up	24 (4.0%)	90.42	13.90
Child Total Difficulties			
Baseline	24 (4.0%)	15.92	6.63
Follow-up	24 (4.0%)	13.60	6.00

The data were inspected to assess whether they met the assumptions for the desired statistical tests. To determine the suitability of paired t-tests, the differences between the pairs of scores at baseline

and follow-up for each of the main study variables were inspected. Histograms, Q-Q plots, and Shapiro-Wilk tests showed that the differences between the pairs of scores were approximately normally distributed. Boxplots revealed no outliers, with the exception of one in the differences in paired scores for Adaptive Emotion Support. This outlier was retained because it was verified that there were no data entry errors, its value wasn't excessively extreme, and it had no significant impact on the data's normality. It was deemed suitable to proceed with the paired t-tests.

To determine the suitability of the mixed ANOVA, the normality of residuals of the Child Total Difficulties scores at baseline and follow-up in the Typical SDQ (score <14) and the Raised SDQ (score ≥14) group was assessed using histograms, Q-Q plots, and Shapiro-Wilk tests. These confirmed that the residuals were approximately normally distributed. Boxplots revealed one non-extreme outlier in the standardized residuals at follow-up, representing a child whose scores substantially worsened post-intervention. No errors were evident in data entry, so the outlier was retained to capture the full range of responses in the sample. Levene's test was non-significant, showing that the homogeneity of variances was not violated.

To establish which statistical test would be appropriate for comparing the characteristics of Completers and Non-completers, the distributions of each variable within these two groups were assessed. In most cases, histograms and the Shapiro-Wilk test indicated that the variables were approximately normally distributed, although boxplots revealed outliers in several instances. The Shapiro-Wilk test for Child Total Difficulties in the Completers group was marginally significant ($p = 0.08$) and, as discussed, the inspection of the histogram suggested a bimodal distribution. For consistency, all variables were evaluated using non-parametric tests for the comparative analyses.

Pre-Post Intervention Comparisons
A series of planned one-tailed paired t-tests were conducted to assess changes in the main study variables between baseline and follow-up. The means and standard deviations for the variables at both time points are given in Table 3.

Cognitive Reappraisal
The average score for Cognitive Reappraisal increased by 2.04 points between baseline and follow-up. A paired t-test showed that this difference was significant, $t(24) = 2.06$, $p = 0.025$. The 95% confidence interval for the average pre-post difference ranged between 4.09 and -0.01, indicating the range in which the true mean difference is likely to lie. Although the confidence intervals include zero, these results are significant under one-tailed testing due to the specific directional hypotheses of the study. In terms of the effect size of this change, Cohen's d indicated a value of 0.41, a medium effect.

Expressive Suppression
For Expressive Suppression, scores decreased by an average of 0.88 points post-intervention. A paired t-test revealed that this decrease was marginally significant, $t(24) = 1.57$, $p = 0.065$, with confidence intervals ranging from -0.28 to 2.04. Cohen's d was 0.31, reflecting a small to medium effect.

Adaptive Emotion Support
On average, Adaptive Emotion Support scores increased by 4.65 points between baseline and follow-up. The paired t-test indicated that this difference was statistically significant, $t(22) = 1.96$, $p = 0.031$, with confidence intervals ranging from 9.58 to -0.27. Cohen's d value was 0.41, a medium effect size.

Maladaptive Emotion Support

The average scores for Maladaptive Emotion Support decreased by 1.00 post-intervention. A paired t-test found that this decrease was not statistically significant, $t(23) = 0.43$, $p = 0.336$, with confidence intervals spanning -3.81 to 5.81.

Child Total Difficulties

For analyses of the Child Total Difficulties scale, the paired t-test and mixed ANOVA were conducted on both the dataset with missing values and the imputed dataset. As the results were consistent between the two, findings from the imputed data are reported for completeness.
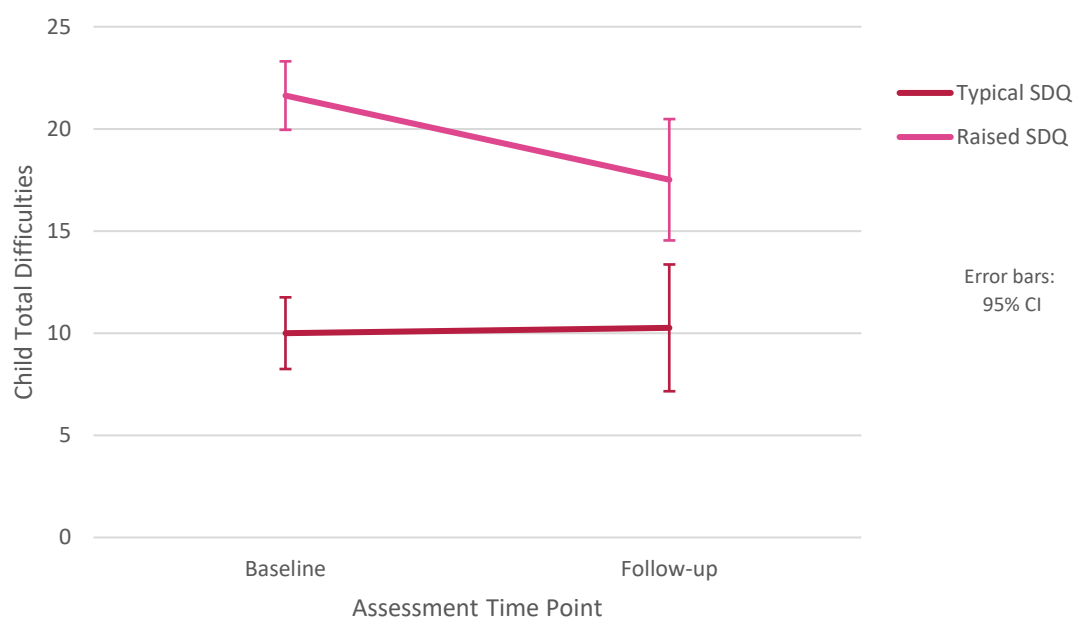
Between baseline and follow-up, the Child Total Difficulties score decreased by an average of 1.83 points. The paired t-test indicated that this difference was statistically significant, $t(22) = 1.83$, $p = 0.04$, with confidence intervals ranging from -0.24 to 3.90. Regarding effect size, Cohen's d was 0.38, a small to medium effect.

Differential Outcomes by SDQ Group

Descriptive statistics demonstrated that at baseline, the Typical SDQ group had an average score of 10.00 (SD = 2.31), compared to a mean of 21.63 (SD = 3.24) for the Raised SDQ group. At follow-up, the Typical SDQ mean was 10.26 points (SD = 5.82), exhibiting minimal change. Conversely, the Raised SDQ mean exhibited a substantial reduction to 17.51 (SD = 3.77), a decline of 4.12 points.

The mixed ANOVA underscored the observed patterns, revealing a significant interaction between Time and SDQ Group, $F(1,21) = 5.84$, $p = .03$, partial $\eta^2 = .22$. This indicates that the change in Child Total Difficulties scores over time differed based on the initial SDQ grouping, as depicted in Figure 1. The pairwise comparisons showed that the decrease of 4.12 points between baseline and follow-up in the Raised SDQ group was significant ($p = 0.005$), whereas no significant change took place in the Typical SDQ group ($p = 0.84$). Moreover, the confidence intervals for the difference in the Raised SDQ group (CI 1.40-6.84) did not overlap with zero, providing additional confidence in these findings. To estimate the magnitude of change from baseline to follow-up, Cohen's d was computed and yielded a value of 0.91, a large effect.

Figure 1 Trajectories of change in Child Total Difficulties scores by SDQ group

In summary, there were a number of improvements in the main study variables between baseline and follow-up. Parents were more likely to use cognitive reappraisal themselves and more likely to assist their children with adaptive emotion regulation strategies, both with medium effect sizes. They were marginally less likely to use expressive suppression. Furthermore, children in the Raised SDQ group, who had elevated psychosocial difficulties at baseline, experienced a significant and substantial reduction in these difficulties post-intervention, with a large effect size.

Comparative Analyses

Demographics

For categorical demographic variables, chi-square tests were conducted to assess whether demographic characteristics were associated with completion status. Where frequency counts were low, categories were combined to avoid low cell counts. A Mann-Whitney U test was conducted to discern differences between Completers and Non-completers for the only continuous demographic variable, target child age.

The chi-square tests found that were no significant associations between completion status and age, gender, ethnicity, marital status, education level, or target child gender. The Mann-Whitney U test found no significant difference in target child age for Completers and Non-completers.

Baseline Study Variables

Mann-Whitney U tests were conducted to discern any differences in the main study variables at baseline between Completers and Non-completers. There were no significant differences in scores for Cognitive Reappraisal, Expressive Suppression, Maladaptive Emotion Support, or Child Total Difficulties. The difference in scores for Adaptive Emotion Support approached significance (U = 581.00, p = 0.06, r = 0.20), with a median score of 132 for Completers and 144 for Non-completers. This indicates that those who did not complete the follow-up questionnaire had higher baseline Adaptive Emotion Support, although the difference was marginal.

In summary, there were no significant demographic differences between Completers and Non-completers. There was one marginally significant difference in the baseline study variables, with Non-completers demonstrating superior Adaptive Emotion Support at baseline.

Secondary Findings: Child Psychosocial Difficulties

Child Difficulties in the Full Sample

In the full sample, the mean Child Total Difficulties baseline score was 16.82. Rounded up, this falls within the 'high' category of the four-band SDQ classification, highlighting the significant clinical need experienced by the average target child. However, examining the distribution of scores, as presented in Figure 2, highlights the diversity in levels of need: 37.2% of children's scores were 'close to average', whilst an equal number had scores in the 'very high' category.
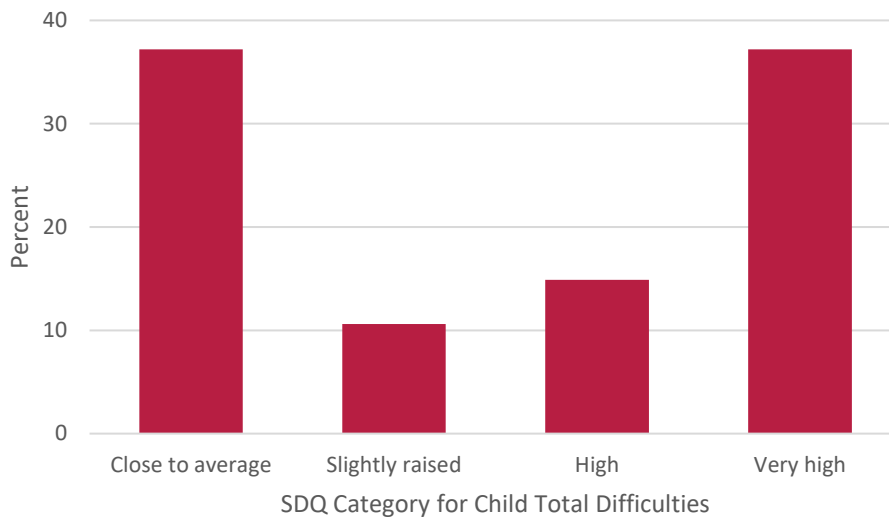
The nature of children's psychosocial difficulties can be elucidated by analysing the average scores for the SDQ subscales and categorizing them within the four-band classification system. These average scores are presented in Table 4, along with the results of the Impact Supplement.

The most prominent psychosocial difficulties were Emotional Problems, with the mean score categorized as 'high'. The average Conduct Problems score fell within the 'slightly raised' category. This subscale should be considered indicative only, as it incorporates data imputed from the Total Difficulties score, limiting its precision and reliability. The Peer Problems and Prosocial averages were also 'slightly raised' and 'slightly lowered' respectively, highlighting the social difficulties in the sample. By contrast, the Hyperactivity subscale was 'close to average'. Parents were aware of their children's psychosocial difficulties, with most parents reporting that their child was experiencing 'definite' or 'severe' difficulties with emotions, concentration, behaviour and/or getting on with others. In most cases, difficulties were chronic, with 83.7% of parents reporting difficulties lasting for over a year. The mean Impact score was 2.99, which is classed as 'very high'.

Table 4 The nature and impact of child psychosocial difficulties for the full sample at baseline

	Full sample
SDQ subscale means	
Emotional Problems (SD)	5.18 (2.67)
Conduct Problems (SD)	3.39 (2.02)
Hyperactivity (SD)	5.26 (2.94)
Peer Problems (SD)	2.99 (2.41)
Prosocial (SD)	7.24 (2.23)
Parental perception of difficulties	
None	8 (8.4%)
Minor	35 (36.8%)
Definite	42 (44.2%)
Severe	10 (10.5%)
Duration of difficulties	

Less than a month	0 (0%)
1-5 months	3 (3.5%)
6-12 months	11 (12.8%)
Over a year	72 (83.7%)
Impact of difficulties	
Mean Impact score (SD)	2.99 (3.04)
Burden of difficulties on family	
Not at all/only a little	36 (41.9%)
Quite a lot/a great deal	50 (58.1%)

Child Difficulties in the Completers Group

Data on the severity, nature, and impact of child psychosocial difficulties in the Completers group before and after the programme are presented in Table 5. The baseline findings appear to be roughly equivalent to those of the full sample, with a broadly comparable distribution of Child Total Difficulties categories and average SDQ subscale categories, similarly high parental perception of difficulties, almost identical chronicity, fairly similar Impact scores, and similarly high burden on families.

The improvements observed between baseline and follow-up correspond to the reduction in average Child Total Difficulties score presented earlier in Table 3. The change in distribution of Child Total Difficulties categories post-intervention exhibits a shift from the higher severity categories to the milder ones, with a marked reduction in the 'very high' category (from 37.5% to 23.8%) and a marked increase in the 'slightly raised' category (from 0% to 19.0%). All the SDQ subscales which were elevated at baseline also showed improvement, with all but one of the follow-up averages falling in the 'close to average' category. Child Emotional Problems, which was the highest at baseline, improved from 'high' to 'slightly raised'.

The overall improvement in children's difficulties is highlighted in the sizable increase in parents describing their child as having 'no difficulties' overall: from 0% of parents at baseline to 29.2% of parents at follow-up. Furthermore, the reduction in mean Impact score from 2.58 to 1.88 represents a shift from the 'very high' category to the 'high' category.

Table 5 The severity, nature, and impact of child psychosocial difficulties at baseline and follow-up for Completers

	Baseline	Follow-up
Child Total Difficulties categorisation		
Close to average	12 (50.0%)	10 (47.6%)
Slightly raised	0 (0%)	4 (19.0%)
High	3 (12.5%)	2 (9.5%)
Very high	9 (37.5%)	5 (23.8%)
SDQ subscale means		
Emotional Problems (SD)	4.92 (2.83)	4.08 (2.43)
Conduct Problems (SD)	2.84 (1.90)	2.39 (1.55)
Hyperactivity (SD)	5.71 (2.29)	4.87 (2.15)

Peer Problems (SD)	2.52 (1.90)	2.25 (1.96)
Prosocial (SD)	7.76 (1.94)	8.17 (1.52)
Parental perception of difficulties		
None	0 (0%)	7 (29.2%)
Minor	12 (48.0%)	8 (33.3%)
Definite	11 (44.0%)	8 (33.3%)
Severe	2 (8.0%)	1 (4.2%)
Duration of difficulties		
Less than a month	0 (0%)	n/a
1-5 months	0 (0%)	n/a
6-12 months	4 (16.7%)	n/a
Over a year	20 (83.3%)	n/a
Impact of difficulties		
Mean Impact score (SD)	2.58 (2.78)	1.88 (2.58)
Burden of difficulties on family		
Not at all/only a little	11 (45.8%)	10 (58.8%)
Quite a lot/a great deal	13 (54.2%)	7 (41.2%)

Child Difficulties in the Raised SDQ Group

The Raised SDQ group comprised of 12 Completers with elevated Child Total Difficulties baseline scores (≥14), all of whom started out in the 'high' or 'very high' SDQ categories. The distribution of the Child Total Difficulties categories at baseline and follow-up for the Raised SDQ group is presented in Figure 3, which highlights the substantial improvement post-intervention.

Figure 3 Distribution of SDQ categories for Child Total Difficulties in the Raised SDQ group at baseline and follow-up
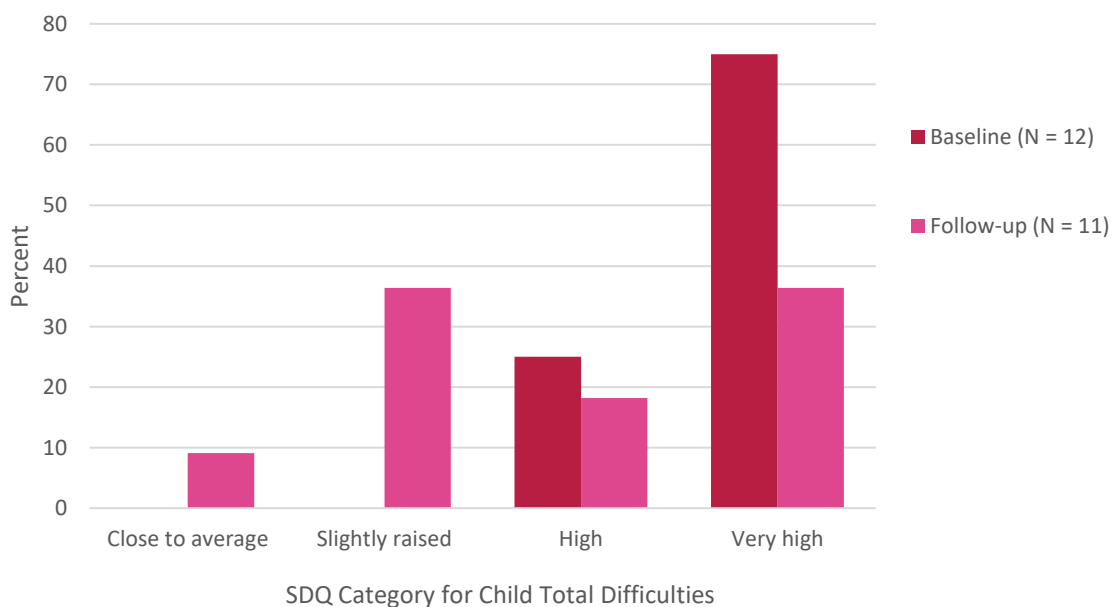
The mean subscale scores for this group before and after the programme are presented in Table 6, along with the findings from the Impact Supplement. As before, Emotional Problems were most prominent, with a 'very high' mean score at baseline improving to 'high' at follow-up. Conduct Problems and Peer Problems were both 'high' at baseline and improved to 'slightly raised' at follow-up. Hyperactivity and Prosocial were 'slightly raised/lowered' respectively at baseline, with Prosocial improving to 'close to average' at follow-up and Hyperactivity remaining in the same category. Overall, difficulties had been persistent amongst this group, lasting over a year in all but one case. The mean impact score was 4.42 at baseline and 3.36 at follow-up, both in the 'very high' category.

Table 6 The nature and impact of children's psychosocial difficulties in the Raised SDQ group at baseline and follow-up

|	Baseline	Follow-up
SDQ subscale means		
Emotional Problems (SD)	7.08 (1.78)	5.64 (1.91)
Conduct Problems (SD)	3.84 (2.01)	2.78 (1.32)
Hyperactivity (SD)	7.42 (1.83)	6.18 (1.17)
Peer Problems (SD)	3.50 (1.68)	2.91 (1.81)
Prosocial (SD)	6.83 (2.08)	7.64 (1.21)
Parental perception of difficulties		
None	0 (0%)	1 (9.1%)
Minor	1 (8.3%)	3 (27.3%)
Definite	9 (75.0%)	6 (54.5%)
Severe	2 (16.7%)	1 (9.1%)
Duration of difficulties		
Less than a month	0 (0%)	n/a
1-5 months	0 (0%)	n/a
6-12 months	1 (8.3%)	n/a
Over a year	11 (91.7%)	n/a
Impact of difficulties		
Mean score (SD)	4.42 (2.78)	3.36 (2.94)
Burden of difficulties on family		
Not at all/only a little	3 (25.0%)	4 (40.0%)
Quite a lot/a great deal	9 (75.0%)	6 (60.0%)

In summary, the average baseline Child Total Difficulties score was indicative of a high level of need, with Emotional Problems being the most prevalent. The majority of difficulties were chronic, enduring over a year, and placed a considerable burden on families. From baseline to follow-up, parents reported an encouraging shift towards reduced difficulties and a corresponding decrease in the Impact score. The improvement in difficulties was particularly noticeable amongst the Raised SDQ group.

Secondary Findings: Participant Feedback Post-Intervention

Perceived Programme Outcomes

In the follow-up SDQ Impact Supplement, parents were asked whether they perceived any overall change in their child's level of difficulties since attending the programme. The findings are presented in Figure 4. Most participants reported noticing a positive change, with 58.3% of participants reporting that the issues became "a bit better", and 4.2% "much better". The remainder believed that the situation remained "about the same" post-intervention. None felt their child's problems had worsened. On the five-point scale, the mean response was 3.67 (SD = 0.57, CI = 3.43 – 3.91), implying a general perception that there was a slight improvement in the child's difficulties.

Figure 4 Perceived changes in children's overall difficulties post-intervention
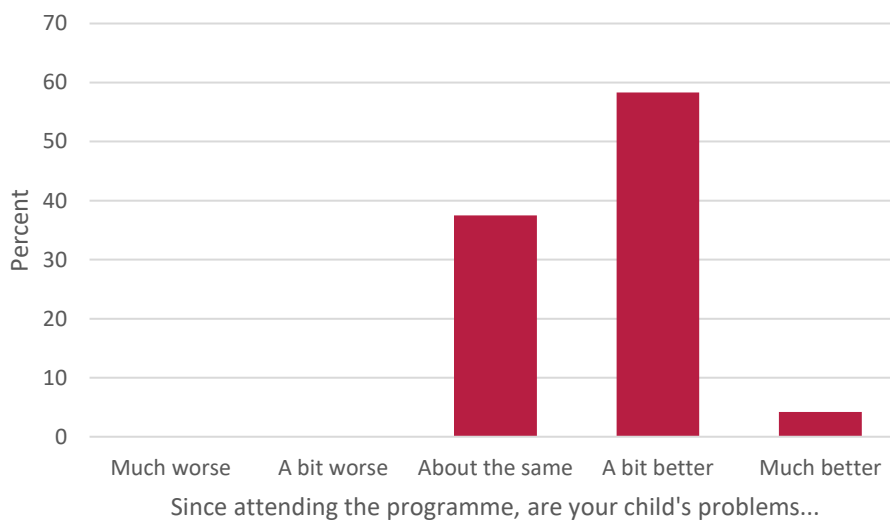
Parents were also asked whether they experienced any additional benefits from the programme (e.g. receiving information, or finding the problems more bearable). On a four-point scale ranging from "not at all" to "a great deal," the mean response was 2.96 (SD = 0.86, CI = 2.60 - 3.32), suggesting that participants found the programme beneficial. Only 4.2% of the respondents felt it was "not at all" helpful, while 70.8% rated its helpfulness "quite a lot" to "a great deal" (see Figure 5).

Figure 5 Perceived auxiliary benefits of the programme
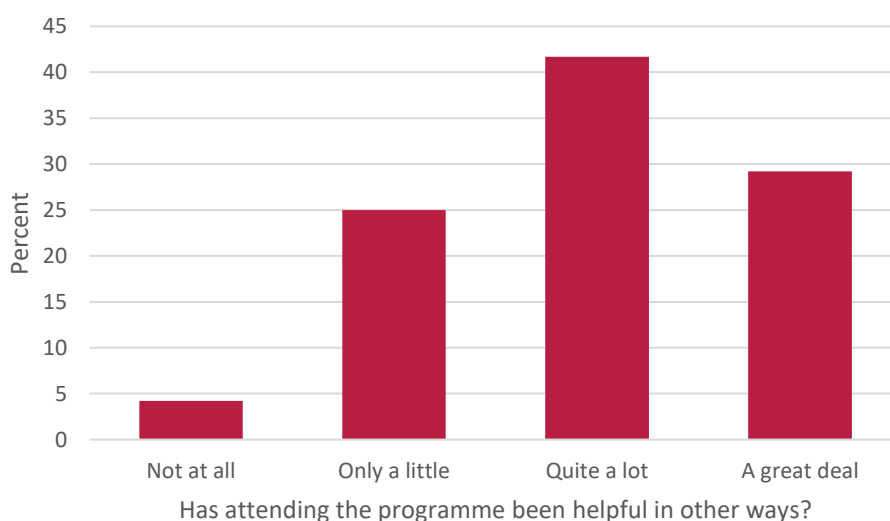
Implementation of Programme Techniques

The frequency with which participants reported applying ideas or techniques learnt on the programme is reported in Figure 6. On the five-point scale, the mean response was 3.12 (SD = 1.05, CI = 2.69 - 3.55), indicating that on average, participants implemented techniques slightly more frequently than "once a week". The responses ranged from "never" (4.0%) to "daily" (8.0%), with the largest proportion of respondents indicating that they applied the techniques "several times a week" (32.0%).

Figure 6 Frequency of implementing programme techniques
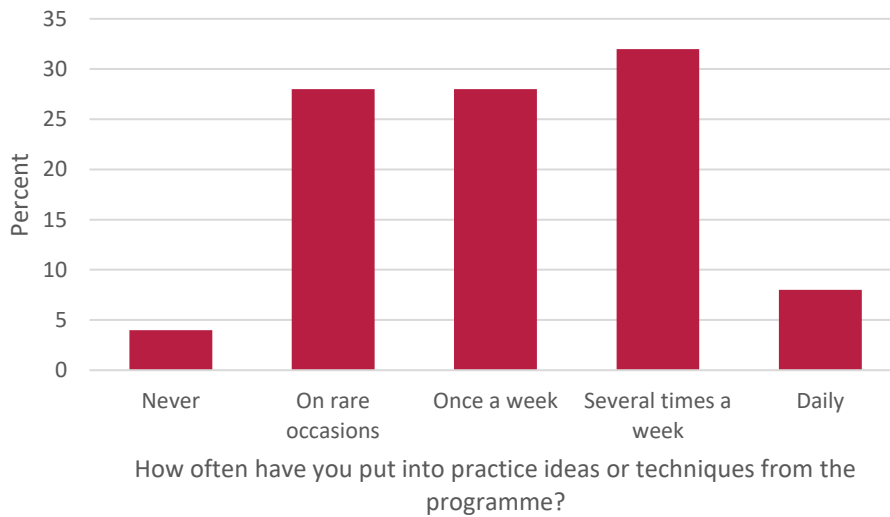

Involvement of a Co-parent

The vast majority of participants (88.0%) reported that another parent was involved in their child's upbringing. Out of these, most (81.8%) reported that the co-parent did not attend any of the programme sessions. However, 13.6% indicated that the co-parent attended more than one session, and a small percentage (4.5%) mentioned that they attended all sessions. On the four-point scale, the mean attendance score was 1.41 (SD = 0.91, CI 1.01-1.81) highlighting the low attendance of sessions by co-parents.

Figure 7 Attendance of a co-parent at programme sessions
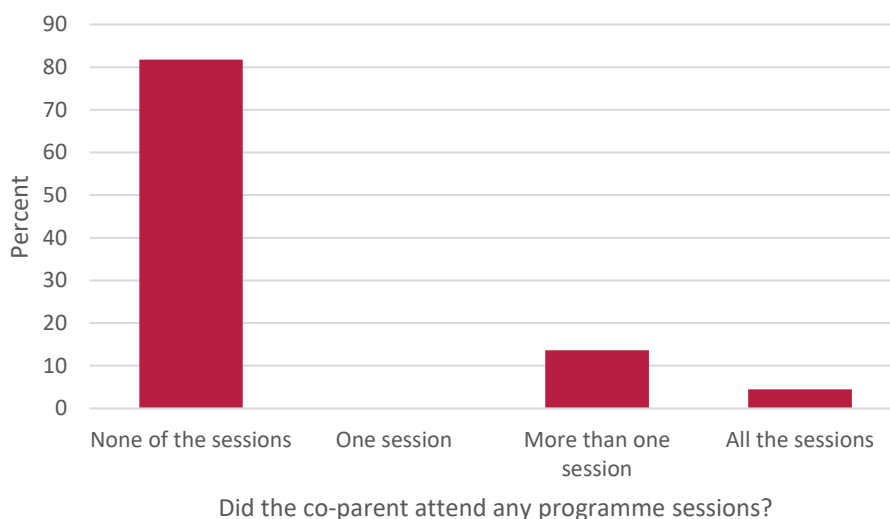
All those who reported the existence of a co-parent were asked about the co-parent's application of programme techniques, regardless of whether the co-parent attended any sessions. Almost half (47.6%) of respondents reported that the co-parent never implemented the techniques covered in the programme. 38.1% thought they applied them on rare occasions, and only a minimal 4.8% felt that the techniques were applied daily by the co-parent. The mean response was 1.76 (SD = 1.00, CI = 1.31-2.21), indicating that co-parents seldom used the techniques.

Figure 8 Frequency of co-parent implementing programme techniques
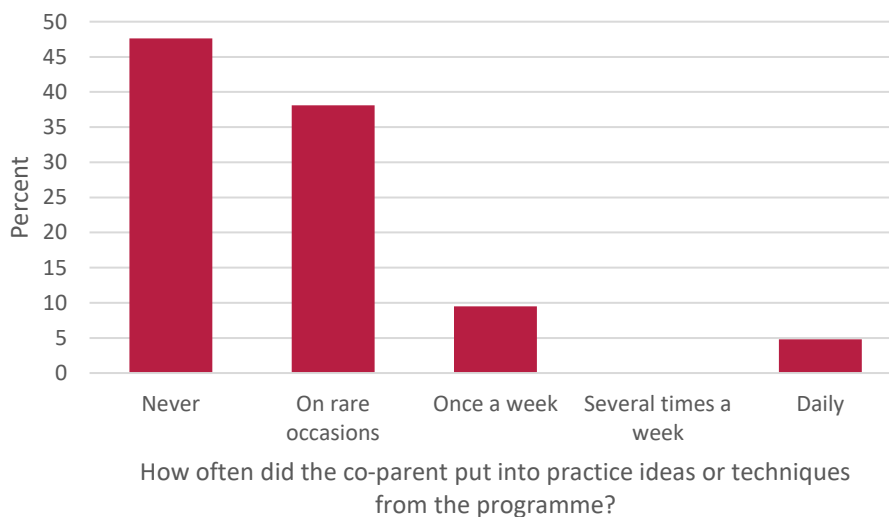
In summary, parents noticed some improvement in their children's psychosocial difficulties post-intervention and experienced some additional personal benefits from attending the programme. The application of programme techniques varied, with a tendency towards weekly use. Co-parent involvement in the programme was low, with most co-parents reportedly not attending any sessions or regularly applying the techniques.

Discussion

This pilot study evaluates the *Raise Resilience* programme's impact on parents' emotion regulation, the emotion support they provide their children, and consequent changes in their children's psychosocial wellbeing. It also explores the nature and extent of the children's difficulties, and parents' experiences post-intervention. It was hypothesized that six weeks after completing the programme, parents would exhibit increased use of Cognitive Reappraisal and decreased use of Expressive Suppression (Hypothesis 1), as well as offering more Adaptive and less Maladaptive Emotion Support to their children (Hypothesis 2). Finally, it was predicted that their children would exhibit a reduction in psychosocial difficulties (Hypothesis 3).

Descriptive data indicated high initial need amongst the children. Most parents reported 'definite' or 'severe' psychosocial difficulties in their children at baseline. Furthermore, over one third of Child Total Difficulties scores fell within the highest band of the SDQ classification, representing the top 5% of difficulties within the UK population. Emotional difficulties were the most pronounced. These difficulties tended to have a substantial negative impact on the child's daily life, with the mean Impact score being in the highest SDQ band, a result that notably includes zero scores for children reported to have no difficulties. Moreover, for the vast majority of children, these difficulties were chronic, lasting over a year, and often placed a significant burden on the entire family. Encouragingly

however, the evaluation found meaningful improvements in both parent and child emotional health following the programme.

Firstly, there were some improvements in how parents regulated their own emotions, providing partial support for Hypothesis 1. Parents exhibited a significant increase in Cognitive Reappraisal and a marginally significant decrease in Expressive Suppression. The notable increase in Cognitive Reappraisal, with a medium effect size, likely reflects the programme's emphasis on the ABC model. Although this increase was found to be significant in the one-tailed test, the confidence intervals, ranging from 4.09 to -0.01, included zero. This means that whilst a change did occur in this sample, caution must be exercised in assuming that the magnitude of this change is consistent and would be replicated in different settings or populations. Meanwhile, the reduction in Expressive Suppression, though marginal, is noteworthy considering the challenges of attaining statistical significance in a small sample size. The confidence intervals for the change in Expressive Suppression (-0.28 to 2.04) also included zero, underscoring the need for further research in broader population to confirm the findings. Nevertheless, taken together, these changes suggest that parents taking the programme generally experienced an encouraging shift towards healthier emotion management strategies, providing an initial indication of the programme's effectiveness. Furthermore, these improvements in parents' own emotion regulation align with participant feedback, which indicated beneficial effects of the programme beyond observed changes in children's difficulty levels.

Some improvements in parents' responses to their children's negative emotions were also noted, partially supporting Hypothesis 2. Post-intervention, parents' Adaptive Emotion Support significantly increased, with parents helping their children to use adaptive emotion regulation strategies like cognitive reappraisal and problem-solving more frequently. Nevertheless, the variability indicated by the confidence intervals (-0.27 to 9.58) suggests that these findings should be interpreted as indicative of a positive direction, pending further research. The positive trend in parents' Adaptive Emotion Support may have been facilitated by the improvement in parents' own emotion regulation (Zimmer-Gembeck et al., 2022), for two reasons. Firstly, helping children to regulate their emotions is a complex task, which, amongst other things, requires a parent to manage their own emotional responses effectively (Reeck et al., 2016). Secondly, parents often mirror their own self-regulation strategies when assisting their children (Cohodes et al., 2021); becoming familiar with using adaptive strategies such as cognitive reappraisal for themselves may make it easier for parents to assist their child with these strategies. In terms of Maladaptive Emotion Support, however, the expected decrease was not observed. This null finding may be attributable to the programme's focus on promoting adaptive strategies rather than on avoiding maladaptive ones. Furthermore, the binary adaptive/maladaptive paradigm may be overly simplistic: instead, emotional health can be conceived of as having the flexibility to adopt the right regulation strategy for the situation (Doré et al., 2016; Kobylińska & Kusev, 2019). In the wide variety of day-to-day circumstances in which parents help their children to regulate emotions, there may be moments in which parental assistance with stereotypically maladaptive strategies (such as avoidance) becomes adaptive.

Finally, there was a significant reduction in children's overall psychosocial difficulties after their parents completed the programme, supporting Hypothesis 3. This inferential finding is corroborated by descriptive data, with a shift from 0% of parents reporting that their child had no psychosocial difficulties at baseline to 30% reporting this at follow-up. Parents also reported lessened impact of children's difficulties on their daily life and a decreased burden on the family. The confidence intervals for the reduction in Child Total Difficulties (-0.24 to 3.90) did cross zero, indicating a need for cautious interpretation. However, further analyses using ANOVA elucidated these findings, revealing that the improvements occurred specifically in the subgroup of children who had high or very high

baseline Total Difficulties scores. These children experienced an average reduction of 4.12 SDQ points post-intervention, with confidence intervals (1.40-6.84) that, though wide, did not overlap with zero. This substantial reduction was significant and had a large effect size (d = 0.9), emphasizing the programme's potential to help those with clinical need. Conversely, children with 'close to average' baseline Total Difficulties scores showed minimal change on average, likely because those with higher baseline difficulties had more scope for noticeable improvement in their psychosocial wellbeing. Without a control group, the improvements in the Raised SDQ group cannot be directly attributed to the programme, as natural recovery and regression to the mean may also have caused extreme scores to move closer to the average over time. However, it is worth noting that the chronic nature of the reported difficulties makes spontaneous improvement during the relatively short 12-week study period less likely. Overall, the nuanced understanding provided by the ANOVA analysis underscores the potential of the programme, especially for those with greater initial challenges. In terms of mechanisms underlying these changes, the observed improvements in children's psychosocial difficulties may be linked to the improvements in parental variables. Enhanced parental emotion regulation not only reduces stress in the family environment (Bertie et al., 2021), but also provides a better role model for children learning to regulate their own emotions (Hajal & Paley, 2020). Likewise, parents' assistance with adaptive emotion regulation strategies may, over time, improve children's emotion regulation as they internalise these strategies. Looking forward, controlled studies with larger samples would be necessary to confirm the effectiveness of the programme and to establish direct links between the observed changes.

Overall, participant feedback indicated that the programme was well received. Parents tended to perceive improvements in their child's difficulties post-intervention, as well as experiencing auxiliary benefits beyond this. Most respondents reported implementing ideas or techniques from the programme at least once a week; however, the involvement and application of techniques by co-parents remained low.

Limitations

Despite the study's robust pre-test/post-test design, several limitations influence the interpretation of the findings. First, the sample's homogeneity may not reflect the broader population that the *Raise Resilience* programme aims to benefit, thereby limiting the generalizability of the findings. The sample's high educational level suggests a potential self-selection bias, as individuals with higher education may be more inclined to agree to participate in research (Reinikainen et al., 2018). While the ethnic make-up of the sample aligns with the communities from which they are drawn, it is not fully representative of the UK's diverse population (Office for National Statistics, 2022). The overrepresentation of mothers, however, does align with the typical demographics observed in parenting programmes (Burgess, 2016), potentially indicating that the gender makeup might accurately represent future *Raise Resilience* participants. By contrast, the sample did demonstrate good age and gender diversity among target children, who had high levels of psychosocial difficulties, suggesting that the study's findings may be informative for those in the most need of intervention.

The high attrition rate of 73.7% is a significant limitation, reducing the study's statistical power and potentially introducing biases into the data. This drop-out may be linked to the time required to complete the questionnaires (15-20 minutes each). Encouragingly, the comparative analyses showed no significant demographic or baseline differences in key study variables between Completers and Non-completers. However, Completers exhibited marginally lower baseline Adaptive Emotion Support, suggesting a potential skew in the results towards those who had more to gain from the intervention. Thus, while the dropout was not systematically related to most measured

characteristics, the attrition dynamics and demographic make-up mean caution is required when generalising the findings.

The decision not to adjust for familywise error in the series of t-tests, which raises the risk of Type I errors (false positives), also necessitates a cautious interpretation of the results. Had a correction for multiple comparisons, such as the Bonferroni adjustment, been applied, the results of the t-tests would not have reached statistical significance. For this study, the detection of potential effects as indicated by the hypotheses was prioritised above the risk of false positives. Considering the reduced sample size at follow-up, corrections for multiple comparisons could have excessively reduced the study's power to detect genuine effects. While this approach is suitable for a pilot study, it underscores the importance of replicating the findings in larger, controlled studies.

Finally, the measurement tools used and the handling of missing data have their own limitations. Despite relying on standardized and validated measures, self- and parent-report tools may be subject to biases, such as social desirability. For the SDQ, multi-informant reports in future studies could provide a more comprehensive assessment of children's psychosocial state. The omission of SDQ item 22 was addressed through person-mean imputation. As the missing data in the study occurred randomly (MCAR), this is an appropriate method that is unlikely to distort the overall findings, but no imputation method is entirely free from uncertainty. Encouragingly, robustness analyses using both imputed and original datasets showed consistent results. These considerations highlight areas for methodological refinement in future research.

Recommendations

To enhance the effectiveness and impact of the *Raise Resilience* programme, and to guide future research endeavours, the following recommendations are proposed:

For Programme Development:

- *Reducing Use of Maladaptive Strategies:* Greater focus on replacing the use of maladaptive emotion regulation strategies with adaptive emotion regulation is recommended, both in terms of parents managing their own emotions and in aiding their children's emotion regulation. Discussing the appeal of maladaptive strategies and incorporating practical, real-life examples of when these could be replaced with more adaptive ones could enhance this aspect of the programme.

- *Post-Programme Engagement:* To foster sustained application of the skills learned, the introduction of post-course engagement strategies is suggested. This could take the form of periodic email reminders containing key content and tips from the programme, encouraging continuous practice and reinforcement of the techniques learned.

- *Involvement of Co-parents:* Given the lack of engagement in the course by co-parents, strategies to involve them more actively in the programme could be explored to promote a unified parenting approach. This could include encouraging participants to invite co-parents, where applicable, to attend sessions or watch session recordings, as well as discussing the challenges and hesitations participants may have about involving co-parents.

For Future Research:

- *Broader Sample for Enhanced Generalizability:* Future studies should aim to include a larger and more diverse participant pool. This would provide greater statistical power and enable a more comprehensive understanding of the programme's effectiveness across different demographics.

- *Streamlined Data Collection:* To improve participant retention and completion rates in future research, it is advisable to shorten the questionnaires. A focus on key measures such as the Strengths and Difficulties Questionnaire (SDQ) and the Impact supplement would make the process less time-consuming for participants, thereby increasing response rates.
- *Differential Impact Analysis:* Further research should delve into analysing the programme's varying impacts on children with typical versus raised baseline SDQ scores. This could provide valuable insights into how the programme benefits different subgroups, leading to a greater understanding of the preventative and remedial effects of the programme.

Conclusions

This short-term longitudinal pre-test/post-test pilot study provides encouraging evidence of the *Raise Resilience* programme's potential to enhance both parents' and children's emotional health. Post-intervention, parents were able to navigate their own and their children's emotions more healthily and effectively. Parents made greater use of cognitive reappraisal and slightly less use of expressive suppression when managing their own emotions. When their children were upset, they were more likely to help them use adaptive strategies to regulate their emotions. These changes in the familial environment appear to have positively impacted the many children in the sample with clinically significant levels of psychosocial difficulties. After their parents completed the course, these children experienced a substantial improvement in their psychosocial wellbeing, suggesting the programme's potential to make a difference in the lives of the children who need it the most.

While these findings are promising, the limitations of the pilot study mean that it offers a preliminary sketch rather than a definitive portrait. The small sample size, notable attrition rate, and absence of a control group limit the generalizability of the results and the ability to attribute the observed changes to the effects of the programme. The potential shown here underscores the need for further research to validate these findings, which should employ a control group and include a larger and more diverse participant pool. Given the programme's affordability at only £19 per parent and the manageable parental time commitment of six hours, the case for further research is compelling.

Ultimately, the findings of this study pave the way for further exploration into the *Raise Resilience* programme as a potentially transformative tool for fostering family emotional wellbeing.

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For further information, please contact:

Chloe Lowry, MSc
Institute of Education,
University College London
Email: chloe.lowry.21@ucl.ac.uk

Bounce Forward
Website: https://bounceforward.com
Email: info@bounceforward.com