‘Books Together’, a dialogic book sharing programme: Adaptation and feasibility testing of online delivery

Hutchings, Judy; Owen, claire; Jones, Anwen; Williams, Margiad

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Abstract

Even before the COVID-19 pandemic the numbers of children entering mainstream education with speech and language learning needs, was significant. Without additional support, these children are at risk of poor academic attainment, mental health difficulties and social problems. This study investigated the feasibility of online delivery of the ‘Books Together’ dialogic book sharing programme. School closures due to COVID-19 meant that parents, initially recruited for a randomised controlled trial (RCT) of the “Books Together” programme, were offered an online version. Participants were 44 parents of 3–5-year-old children. An online weekly survey and end of programme questionnaire explored parental responses to the programme. Measures of child language, child behaviour, social-emotional ability, and parenting competence were collected at baseline. The same measures were collected at follow-up, except the child language measure which could not be collected due to COVID-19 restrictions. Online deivery was feasible with 79% of parents completing the programme (mean 6.06 of 7 sessions attended). Parents reported high satisfaction (80 - 97%) with various components of the programme and all reported continuing to book share with their children. The programme achieved significant post-intervention increases in parenting competence and well-being and child prosocial behaviour and social/emotional ability. The programme is low-cost and can increase the parenting strategies that build children’s linguistic abilities. Results suggest that the online programme is as effective as the group based version. The results of this and the previous group based version of the programmed justify a larger trial comparing the two delivery modes.

Keywords: Dialogic book sharing; parent-child interactions; child behaviour and social/emotional ability; online parent training.

Over the last decade growing numbers of children with speech and language deficits have entered primary school (O’Connor et al., 2018). These children are not equipped to prosper or achieve their full academic potential as they do not have the cognitive and/or social-emotional ability (e.g., self-regulation, peer relationship skills) required for school readiness (Action for Children, 2017). These linguistic skill deficits occur more frequently among children living in

socially disadvantaged circumstances and are evident by age 5 (Juniper Education, 2021). Delays that persist beyond the preschool years predict disengagement from the school environment (Bierman et al., 2008), and have life-long effects, including underachievement, poor mental health, and social problems (Jones et al., 2015).

Parenting behaviours contribute significantly to children's school readiness (Welsh et al., 2014) through their contribution to the development of children's language skills which primarily depend on exposure to child directed speech from caregivers during the preschool years (Golinkoff et al., 2019). More frequent exposure to words and increased quality of language input from caregivers is associated with children's vocabulary growth (Hart & Risley, 1995; Rowe, 2018) and child-directed speech quality is a strong predictor of children's vocabulary and language development (Hoff et al., 2017). Parents who provide stimulating interpersonal interactive activities for preschool children can optimise their language skills, providing a safeguard against later psychosocial problems (Duff, 2018; Roseberry-McKibben, 2013). Children whose parents speak little to them or whose homes lack stimulation (Gridley et al., 2013; Jeong et al., 2018) frequently start school with significant skill deficits (Roulstone et al., 2011). Furthermore, language and communication skills are more difficult to acquire as children get older (Khul, 2004).

Parenting programmes that teach dialogic book sharing (DBS) strategies increase children's language abilities (Dowdell et al., 2019) laying the groundwork for children's successful social/emotional expression and understanding (Murray et al., 2016). During DBS, adults use the picture content of books to encourage children's participation by following their focus of interest, active listening, open questioning, reflecting on their utterances, praising and encouraging them and linking book content to children's experience. These reciprocal interactions facilitate young children's comprehension and construction of language, increasing their vocabulary and verbal reasoning abilities (Rowe et al., 2017). These language skills are positively associated with children's ability to successfully transition into school and their subsequent academic attainment (Reynolds et al., 2019; Vernon-Feagans et al., 2020).

The evidence for DBS prompted a small pre-post study of a school-based delivery of the Books Together DBS programme in North Wales for children aged 3-5 years, investigating its feasibility and exploring the associations between parental skills and children's school readiness. School-based staff delivered the programme to targeted groups of parents and found post-

intervention improvements in parenting competence and reductions in negative parenting as well as increases in children's expressive language, prosocial behaviour, and social/emotional ability (Williams et al., 2024). The trial reported full parent retention and high parental attendance, demonstrating that it engaged parents and increased a number of children's school readiness skills. Following this trial, the next planned step was to undertake a more rigorous randomised controlled trial (RCT). Recruitment commenced in January 2020 however, the lockdown restrictions of the COVID-19 pandemic required the development of new strategies to deliver the programme to parents. As a result the plan was changed to delivery of an online version of the programme.

At the time of the trial around 96% of UK households had internet access (Office for National Statistics, 2020) and many parents reported obtaining parenting knowledge and guidance from online sources and expressed a preference for online learning (Tully et al., 2017). Evidence was also beginning to emerge suggesting that online delivery could be as effective as live programme delivery with a recent multilevel meta-analysis comparing online with in-person parenting support finding consistent evidence that online programmes were not inferior and reporting a trend that parents were more satisfied with online support (Leijten et al., 2024). Online parent programmes show promise in terms of ease of use, delivery, access and autonomy, and cost and time reductions for families (Breitenstein & Gross, 2013). Consequently, they have the potential to increase participation rates, expand reach to underserved populations and reduce the resources and costs needed to deliver programme content (Sanders, 2019; Dadds et al., 2019). Modelling and prompting the use of DBS parenting strategies through online video links could provide an accessible, supportive, and engaging experience that would increase parental knowledge, behaviour, and competence associated with supporting their children's linguistic competencies (Baumel & Faber, 2018; Corralejo & Rodriguez, 2018; Spencer et al., 2020) and provide much needed support to parents during the challenging circumstances of the COVID-19 school shutdown. The COVID-19 pandemic provided an opportunity to introduce remote delivery of the 'Books Together' programme, that already had preliminary evidence of effectiveness as a group based programme, and could help parents to promote their children's socio-emotional and language skills.

The aims of the current study were to:

i) Test the feasibility and acceptability of the online 'Books Together' programme delivered to parents of children aged 3-5 years, in terms of both recruitment and retention.
ii) To report on the initial effectiveness of the programme in terms of its impact on parenting skills and overall well-being and child behaviour, social-emotional competencies and language skills.

Method

Design

Data were collected during a pre-post pilot study to explore the impact of online delivery of the 'Books Together' programme. Outcomes were assessed using a repeated measures design via questionnaires, online weekly surveys, direct/indirect observations of parent/child interactions and a follow up questionnaire exploring families' book sharing behaviours following programme engagement.

Participants

The study initially recruited parents of children in nursery and reception classes with the intention of undertaking an RCT, building on the results of the initial school-based pilot (Williams et al., 2024). After initial recruitment, due to COVID-19 restrictions and school closures, an online version of the programme was offered to the recruited parents. Recruitment to the initial RCT was undertaken by school-based staff in infant/primary schools across North Wales with targeted parents of 3-5 years old pre-school children whom schools thought would benefit from a programme to enhance their language skills. Eighteen schools signed up for the trial and thirteen schools had successfully recruited 57 parents before COVID-19 restrictions led to school closures. Of the 57 recruited parents, 44 (77.2%) agreed to continue with the alternative online programme format during lockdown restrictions.

Intervention

'Books Together' is based on a programme developed by Murray and Cooper (Cooper et al., 2015). The seven-session programme teaches parents to have stimulating and rich interactions with children whilst sharing a book, and to engage them actively in conversation about the picture content, to encourage curiosity and thinking skills. The programme promotes active child engagement including following the child's focus of interest, pointing and naming, open questioning and linking book content to the child's experiences. Since the initial South

African trial (Murray et al., 2016) versions have been developed for children of different ages. In this study, 'Books Together', based on a 3–5-year-old version (Murray et al., 2018), was adapted for online delivery.

'Books Together' was initially designed, and trialled in Wales, for targeted caregivers meeting weekly in small groups (between three and five parents and their children) in their child's school and was delivered by school based staff over seven weeks (Williams et al., 2024). The first three sessions cover academic coaching and the last four social/emotional coaching. During the first hour of each session the strategies are taught to parents through discussion, powerpoint slides, video-clips and role-play. During the second hour children join the group and parents have supervised practice with their own child and are given home assignments. At each session, parents receive a different book to take home and a summary sheet with reminders of the key points from the session.

Overview of changes to delivery format in response to COVID-19. In June 2020 all recruited parents were offered an online version of the intervention and the study was changed to a feasibility evaluation of the online programme. The powerpoint presentations were adapted to include filmed trainer voiceover accompanying the content slides and video clips. To enable home practice, parents received access to the seven video sessions by email to complete at their own pace. The seven books and handouts were sent to parents by courier service in separate large envelopes entitled session 1, session 2, etc. Parents were encouraged to practice the strategies presented in each session with the allocated book for 10-15 minutes a day with their child and they then kept the books. Parents could contact the research office for support if they had any problems accessing the programme. At the end of each week, parents were sent a link to an online survey to gather information regarding the level of parent/child engagement, satisfaction, and the usefulness of the strategies taught. Midway through the programme (week 4) all parents were called by a member of the research team and given an opportunity to discuss programme engagement and to address any difficulties that they may be experiencing with participation.

Measures

Data were collected using well-established parent completed standardised questionnaires, to assess the anticipated changes in parental skills and confidence and child social emotional and language skills and behaviour. Weekly surveys and a post-course end of programme evaluation

survey explored parental feedback on the programme and parents' ongoing use of the programme strategies. There were also direct and video-recorded observations of parent-child interactions,

Family Demographics Questionnaire. This questionnaire captured information regarding basic socio-demographic details, including characteristics of the family structure, parental education, employment status, and participant age.

Feasibility outcomes. Feasibility outcomes were operationalised as programme satisfaction and acceptability. These were explored using online weekly surveys and a final questionnaire exploring parent/child book sharing behaviour following programme completion. The weekly online survey consisted of five questions, each rated on a five point scale, that asked about child enjoyment, usefulness of the session, feedback on the videos and handouts and participant satisfaction with the programme. The follow-up questionnaire asked about participants' ongoing use of the programme skills.

Observed parent/child interaction – based on the Dyadic Parent-Child Interaction Coding System (DPICS; Robinson & Eyberg, 1981). The observation was based on categories from the Dyadic Parent-Child Interaction Coding System (DPICS: Robinson & Eyberg, 1981) to assess parent/child interactions during a 10-minute shared reading activity. Observations were video recorded for later analysis to obtain an account of the behaviour of interest and to improve external validity (Friman et al., 2000). Nine parent verbal behaviour categories were coded: unlabelled praise, labelled praise, encouragement, reflection, academic coaching, social-emotional coaching, linking to child experience, and negative parenting were used to capture parenting skills taught in the programme. The DPICS is a widely researched measure and has shown good reliability (r = .91 parent behaviour; r = .92 child behaviour) (Robinson & Eyberg, 1981).

Child behaviour.

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) is a brief parent-reported behavioural screening measure for 3-16-year-olds to detect social-emotional and behavioural problems. It has two age versions, is available in many languages and has five subscales: emotional symptoms, conduct problems, hyperactivity and inattention, peer relationship problems, and prosocial behaviour. The present study utilised the English language versions for children aged 2-4 years and children aged 4 to 16 years to cover the study child age range. The SDQ has 25 items measured on a 3-point Likert scale, with responses not true,

somewhat true, and certainly true. A total difficulties score is attained by combining scores from the four problem subscales. Higher scores indicate greater levels of difficulties with 0-13 categorised as close to average, 14-16 as slightly raised, 17-19 as high, and 20-40 as very high. The SDQ has good internal consistency (mean a = .73), test-retest stability (r =.62), and discriminant validity (Stone et al., 2010).

The Conners Abbreviated Scale (Conners et al., 1998) is a parent-reported, 10-item scale assessing the incidence of hyperactivity in children aged three to 17 years. Responses range from 0 (not at all) to 3 (very much) with a minimum score of 0 and a maximum score of 30. The clinical cut-off score for hyperactivity is 15. The questionnaire contains the most highly loaded symptoms from the factor scales of the Conners Parent and Conners Teacher Rating Scales (Conners et al., 1998). It has shown good internal consistency (α = .89; Parker et al., 1996) and good test-retest reliability (r = .89; Zentall & Barack, 1979).

Child social-emotional ability. The Ages and Stages Social–Emotional questionnaire (ASQ:SE; Squires et al., 2001) is a parent-completed social-emotional screener for children aged between one and six years. Age-appropriate versions were used for children aged 33-42 months, 42-54 months, or 54-72 months to cover the child age range. Each questionnaire contains 39 questions covering seven behavioural areas: self-regulation, compliance, adaptive functioning, autonomy, affect, social-communication, and interaction with people. Items score on a three-point Likert scale, often/always, sometimes, or rarely/never which are converted to points of 10, 5, and 0 respectively. Low scores (0-70) indicate expected levels of social-emotional competency, medium scores (70-85) indicate that further monitoring is required, and higher scores (85 and above) indicate a high risk of current social-emotional problems. The ASQ:SE has high internal consistency for all scales (Cronbach's alpha = 0.82) (Squires, et al., 2001).

Parental competence. The Parenting Sense of Competence Scale (PSOC; Johnston & Mash, 1989) is a 17-item self-report questionnaire that measures parents' sense of their own competence using two broad scales: self-efficacy and satisfaction with their own parenting. Responses are rated on a six-point Likert scale from 1 = strongly disagree, to 6 = strongly agree. Lower scores indicate a lower sense of parenting competence (overall score), lower sense of parenting self-efficacy (self-efficacy subscale), or lower sense of parenting satisfaction (satisfaction subscale). The PSOC has strong internal consistency on both the efficacy and satisfaction scales (Cronbach's alpha = 0.80) (Ohan at al., 2000).

Child language ability (baseline data only). The Schedule of Growing Skills II (SOGS II) (Bellman et al., 1996) is a developmental screening tool used to assess the developmental trajectories of children from birth to five years of age. The speech and language domain of the scale measures receptive language by direct observation on an 18-item checklist, and expressive language by direct observation of a 17-item checklist during play-based activities. The SOGS II displays high levels of internal consistency on all scales (Cronbach's alpha = 0.91) (Williams et al., 2013).

Parental well-being. The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al., 2007) has 14 positively worded items for assessing mental well-being. Responses to statements regarding thoughts and feelings over the last two weeks are rated on a five-point Likert scale from 1 = None of the time, to 5 = All the time. The national average mental well-being score is 51 (inter-quartile range 45-56) with a score of 41-44 indicative of possible mild depression and a score of 41 or below indicative of probable clinical depression. The WEMWBS displays good internal consistency (Cronbach alpha = 0.91) (Tennant et al., 2007).

Ethical Considerations

Ethical approval, which outlined the amendments to the study protocol in response to COVID-19 restrictions, was obtained from Bangor University School of Psychology Ethics committee on 15th April 2020 (application number: 2020-16699-A14670). All study participants provided written and verbal informed consent before any data was collected.

Procedures

School recruitment. Details of the proposed school delivered RCT study were sent to North Wales schools in a monthly newsletter from the Regional School Effectiveness and Improvement Service. Schools were invited to contact the research team with expressions of interest. Expressions of interest were obtained from 18 primary schools who were then sent leaflets describing programme content, training, resource provision, and expectations of school-based commitment. Schools were asked to target families of children identified as needing support with language, behaviour, and/or social interactions. Of the eighteen schools that had completed expressions of interest 13 had recruited parents before COVID-19 restrictions disrupted the study (see Figure 1).

Family recruitment. Parents were initially recruited by the schools sending letters home and/or directly contacting families of children whom they identified as needing support with

language, behaviour, and/or social interactions. The letters invited parents to enrol on a group programme to be delivered by a member of school staff. Families were included if they had a child aged 3-5 years and could commit to the seven-week group programme. Schools forwarded contact details of interested parents to the researcher who telephoned them to discuss the programme and explain what their involvement entailed. Interested parties were visited at home to obtain written participation consent. Fifty-seven parents from 13 schools agreed to participate in the school-based delivery of the programme. With the onset of COVID-19 all 57 parents were contacted by the main researcher (second author) to explore whether they would like to continue to participate in the study in an online format. Forty-four parents (77.2%) agreed to participate in the online trial (see flow diagram in Figure 1).

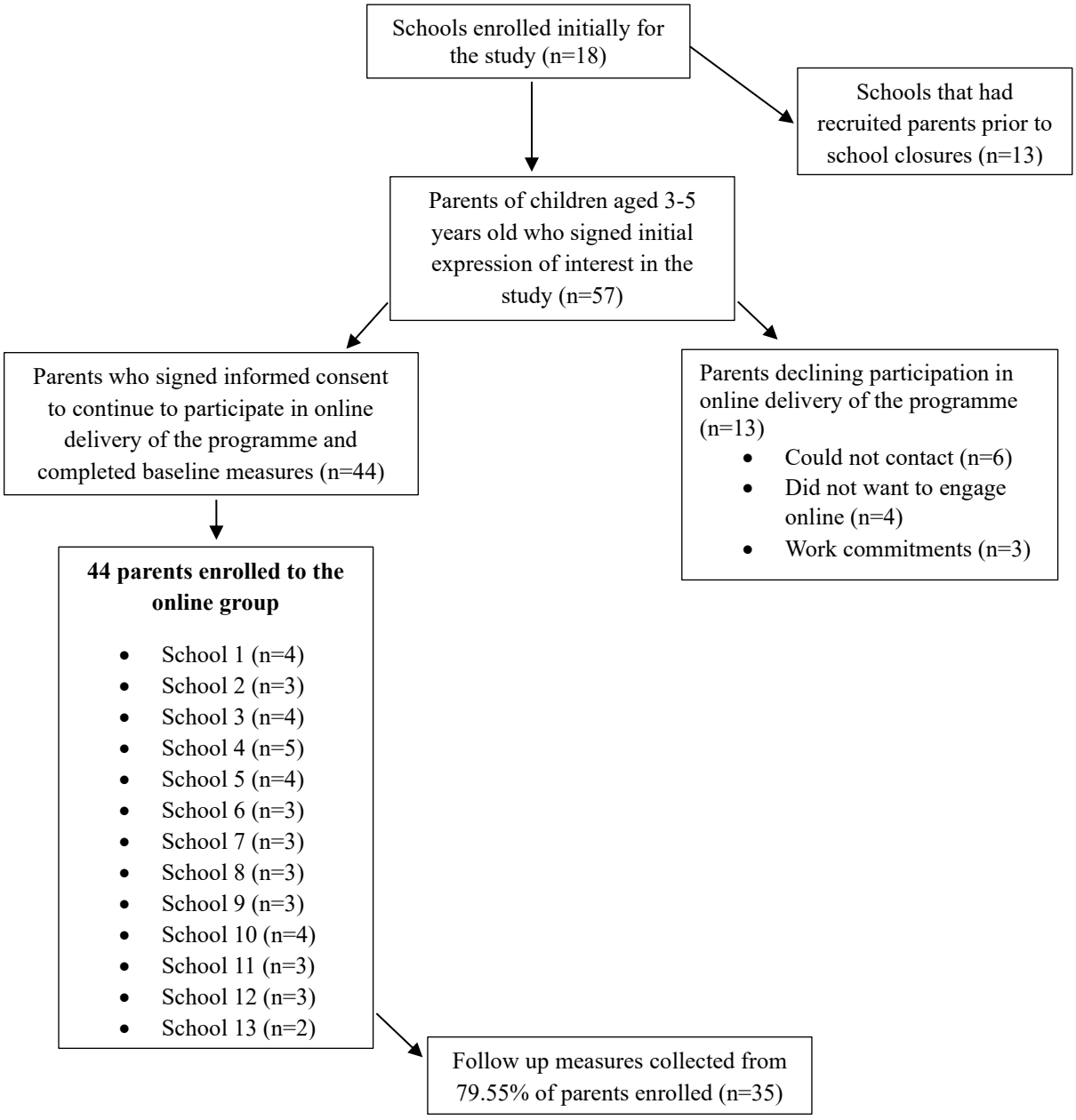

Figure 1: Participant flow diagram.

Data collection. Baseline data were collected from most of the participants (n = 34, 77.3%) during two home visits before COVID-19 restrictions made face to face contact impossible (January to mid-March 2020). Subsequently, to complete the baseline data collection, data was collected over the phone from the remaining ten participants (mid-March to May 2020). The programme was delivered in June/July and follow-up data collection (July-September 2020) was conducted over the phone, on average one month post course. As the SOGS data could not

be collected in this manner, only baseline data from the 34 participants seen in person was gathered with regards to children's language abilities, with no follow-up SOGS data obtained. Data collection included a 10-minute observation of parent-child book sharing activity at baseline and follow-up. An Usborne Farmyard Tales series book, for children aged between 3 and 6 years, was provided and parents were asked to look at the book with their child for 10 minutes. The books include brief simple text in a bright and colourful context. 'The Naughty Sheep' was used at baseline and 'Pig Gets Stuck' for the post-course observations to control for prior experience. This was collected through direct observation at baseline for 34 parents, and the other parents (n = 10) were sent a book and recorded themselves sharing the book with their child which they uploaded to a secure OneDrive link. Follow-up observation was also requested in the same way. Participants were invited to share the book in their preferred language. At baseline 37 parents chose the medium of English, and seven parents the medium of Welsh. The second author (primary coder) coded all video observations, and the third author (the criterion coder) coded 25% of randomly selected videos for inter-rater reliability. Researchers achieved good inter-rater reliability (80%) across all scales. The interclass correlations (ICC) were between .795 and .987.

Statistical Analysis

Measures of parental competence and well-being, and child behaviour, language, attention, and social-emotional ability were analysed using the International Business Machine Corporation Statistical Package for Social Sciences 22 (IBM SPSS statistics 22). Data were scored according to the guidelines for each measure. Descriptive statistics (means and standard deviations) were calculated. Paired samples t-tests were performed to determine intervention effects. The SDQ, ASQ:SE, Connor's abbreviated, and behavioural observation measures violated the assumption of normality and were analysed using an equivalent non-parametric test (Wilcox Signed Rank). Data from the online weekly surveys were exported to Excel and descriptive statistics were calculated. Data from the follow-up questionnaire on continued programme/strategy use were summed using descriptive statistics.

Results

Sample Characteristics

Forty female and four male caregivers agreed to participate. Half of the children (50%) were male, with a mean age of 48.49 months (SD = 5.29). Eighteen caregivers (40.9%) reported

living in poverty and over half of the children (*n* = 27, 61.4%) had at least one risk factor for poor school readiness (see Table 1) with over one third of the sample (38.6%) reporting two or more risk factors. Most parents (56.8%) reported low mental well-being, being below the general median score of 51, with nine (20.5%) indicating possible depression (Tennant et al., 2007) (see Table 1). Most of the children on whom baseline language ability was collected (*n* = 21, 61.8%) scored with delays in either expressive and/or receptive language ability on the SOGS measure.

Table 1

Sample characteristics at baseline

Demographics	**All (*N* = 44)**
Child characteristics	
Child age, months: *M (SD)*	48.49 (5.29)
Child gender, male: *n (%)*	22 (50.0)
Child behaviour problems: *n (%)*	10 (22.7)
Child social/emotional difficulties: *n (%)*	18 (40.9)
Child attention problems: *n (%)*	8 (18.2)
Child language delay*: *n (%)*	21 (61.8)
Parent characteristics	
Parent Age, years: *M (SD)*	33.82 (5.86)
Age parent left school, years: *M (SD)*	16.69 (2.24)
Parent low education: *n (%)*	19 (43.2)
Parent unemployment: *n (%)*	25 (56.8)
Single parents: *n (%)*	13 (29.6)
Low parent mental well-being: *M (SD)*	49.12 (8.41)

**N* = 34

Feasibility Outcomes

Programme engagement. Follow-up data were collected from 35 (79.6%) of the 44 parents who provided baseline data, with most (*n* = 26, 74.3%) reporting that they had participated in all sessions (programme completion). The remaining participants reported that they had engaged with at least four of the sessions (*mean session participation* = 6.06, *SD* = 1.25). Four participants (9.1%) withdrew during the study due to lack of time or personal issues,

and five (11.4%) were lost to follow-up. Follow-up observation data was obtained from 16 parents.

Programme satisfaction. Data provided from the seven online weekly surveys was returned by 35 participants (80%) with a mean of 17 (48.57%) responses per week. The mean overall response of positive ratings, 'a lot/very much' regarding the usefulness of the programme content and resources for engaging families in book sharing activities was 89%.

Table 2 Percentage of weekly survey responses answering positively with 'A lot or very much'

Qualitative weekly questions	Child enjoyment?	Usefulness of session?	Videos clear/ understandable?	Handouts clear/ understandable?	Satisfaction with the session
Responses rated a lot or very much	87%	80%	93%	97%	90%

All parents from whom follow-up data was collected (n = 35, 100%) also completed the final questionnaire exploring post-course parent/child book sharing behaviour. All reported that they had continued to book-share with their child to varying degrees following programme completion with twenty-one parents (60%) reporting that they book-shared daily, and 25 parents (71.42%) reporting that they had added book sharing to their child's bedtime routine.

Pre-Post Programme Results

Paired *t*-tests and Wilcoxon signed-rank nonparametric tests were conducted on the data from the 35 participants (79.6%) who provided baseline and follow-up data and on 16 (45.7%) for whom both baseline and follow-up observation data were available, to explore the effects on children's school readiness outcomes (behaviour, social/emotional competence, and hyperactivity), as well as parenting capacity, competence, and overall mental well-being.

Child outcomes. Children displayed significantly lower overall behaviour problems: Z = -3.671, p = < .001, and reduced overall social/emotional difficulties: Z = -4.368, p = <.001 at follow-up compared to baseline. There were no significant differences in hyperactivity: Z = -.817, p = .414 (see Table 3).

Table 3

Baseline and follow-up means and standard deviations for child outcomes of behaviour, social-emotional competencies, and hyperactivity (n = 35)

Outcomes	***n***	**Baseline** ***M (SD)***	**Follow-up** ***M (SD)***	***p***	***d***
Child Outcomes					
SDQ	35	12.40 (5.95)	8.40 (5.97)	.001**	0.6
ASQ-SE	35	65.30 (39.11)	32.70 (37.8)	.001**	0.8
Conners	35	11.27 (7.35)	9.05 (6.15)	.414	0.2
Parent Outcomes					
PSOC	35	49.14 (8.35)	52.54 (6.27)	.003**	0.5
PSOC Self-efficacy	35	31.23 (4.82)	33.26 (3.80)	.021*	0.5
PSOC Satisfaction	35	33.29 (6.42)	36.26 (5.08)	.014*	0.5
WEMWBS	35	49.29 (8.33)	52.57 (6.27)	.003**	0.4
Praise and Encouragement[a]	16	2.19 (3.23)	1.56 (1.46)	.458	0.2
Reflection[a]	16	4.81 (4.38)	8.44 (4.79)	.030*	0.5
Academic Coaching[a]	16	23.31 (10.04)	29.69 (12.03)	.036*	0.5
Social-emotional Coaching[a]	16	3.13 (2.30)	7.63 (3.24)	.002**	0.8
Linking[a]	16	1.44 (1.79)	2.94 (3.70)	.220	0.3
Negative Strategies[a]	16	1.25 (1.06)	.813 (1.11)	.088	0.4

ASQ-SE-Ages and Stages Social Emotional Questionnaire; Conners-Conners Abbreviated Parent-Teacher Questionnaire; PSOC-Parental Sense of Competence questionnaire; SDQ-Strengths and Difficulties Questionnaire; WEMWBS-Warwick Edinburgh Mental Well-Being Scale

* Sig at $p < .05$ **Sig at $p < .01$

[a] Observed variables

Parent outcomes. The results of the paired samples *t*-test on parental competence (PSOC) showed significant improvements in parental self-efficacy: $t(34) = -2.43$, $p = .021$; satisfaction: $t(34) = -2.60$, $p = .014$; and overall sense of parenting competence: $t(34) = -3.21$, $p =$

.003. The results of the paired samples *t*-test on the WEMWBS showed improved overall parental well-being at follow-up: $t(34) = -3.27$, $p = .003$ (see Table 3). At follow-up, observation of parent/child interactions whilst book sharing was recorded and uploaded by 16 parents, of whom only ten (28.6%) provided the full 10 minutes of data. Data from the first five minutes of all recordings was coded. Significant increases were shown in the frequency of use of positive parenting strategies of reflection: $Z = 2.17$, $p = .030$, academic coaching: $Z = 2.10$, $p = 0.36$, and social/emotional coaching: $Z = 3.16$, $p = .002$, at follow-up. There was no significant difference for the frequency of praise and encouragement: $Z = -.742$, $p = .458$, linking: $Z = 1.23$, $p = .220$; or negative parenting strategies: $Z = -1.71$, $p = .088$ (see Table 3).

Discussion

This paper reports on a feasibility study of an online delivery of the 'Books Together' programme to parents of children aged 3-5 years, 61.8% of whom had significant language delay. The study explored parent retention and satisfaction. Programme impact explored parenting skills, confidence and book sharing behaviour and children's social-emotional skills and behaviour. COVID-19 pandemic restrictions brought unprecedented challenges (Araujo et al., 2021; YouGov, 2020) with an increase in parental concerns regarding their children's educational progress (Booth et al., 2021) and an interruption to face-to-face interventions. Prior to lockdown, 57 families had enrolled for the school-based group "Books Together" programme. Of these 44 (77%) agreed to access the online programme during lockdown. At baseline a high proportion of the children (61.8%) had language delay and 40.9% lived in conditions of socioeconomic disadvantage.

The effectiveness of any parenting programme is contingent on its capacity to engage and retain parents (Dadds et al., 2019) and retention was good with more than three-quarters (80%) of enrolees completing the programme. This is higher than typical rates reported for many online parenting programmes that report attrition rates of between 30% - 50% (Chacko et al., 2016; Dadds et al., 2019; Hall & Bierman, 2015). Most parents (71%) reported that they accessed all seven sessions with mean engagement of 6.06 sessions. This was similar to the smaller school-based group delivery of the same programme which reported full parent engagement (Williams et al., 2024). Parental weekly feedback reported high levels of child engagement and their own satisfaction with the usefulness of the programme, its materials and the sessions. A follow-up questionnaire reported high levels of ongoing use of book sharing.

The study reported significant increases in parenting self-efficacy, confidence, satisfaction, and overall mental well-being. High levels of parental self-efficacy and well-being are associated with increases in the quality of parent/child interactions, including parental warmth, responsiveness, and involvement (Trivette et al., 2010) and parental confidence in their capacity to promote their children's development is a key factor in healthy functioning for parents and their children (Albanese et al., 2019).

Children's behavioural problems were significantly reduced as were overall social/emotional difficulties at follow-up compared to baseline and children's prosocial behaviour had improved. These findings replicate studies of group delivered DBS programmes including Books Together (Cooper et al., 2015; Dowdell et al., 2019; Williams et al. 2024). The lack of significant improvements in children's hyperactivity may be explained by low baseline attention problems (18.8%).

The observed parenting skills of social/emotional and academic coaching ability and reflection improved significantly. However, the results from the observational data were not representative of the whole sample given that only 16 parents (45.7%) completed and returned online video observations of themselves and their child sharing a book at follow-up. The reasons for this are not clear but may have involved technological challenges in recording and uploading video or parental concerns regarding analysis of their parenting skills or their child's behaviour, and development (Bennetts et al., 2017). In the presence of a researcher at baseline, 77% of parents were video recorded and the remaining 10 parents uploaded and sent video recordings of themselves and their child book sharing.

Language deficits among children at school enrolment were already a significant problem at the time of trial recruitment (Beard, 2018; Bercow, 2018) and the pandemic has resulted in an increase in numbers of children arriving at school with such deficits making exploring strategies to address this challenge even more essential (Bercow, 2024). The trial reported on parents who had been recruited by their child's school which was asked to identify children with speech and language learning needs and 61.8% of trial children had significant language delay.

Whilst 77% of parents, who had enrolled for a group programme, signed up for the online version, and most (80%) were retained and reported both good outcomes and satisfaction, it is unclear whether future online delivery, when the COVID-19 condition of parents being at home

with their children would not apply, would achieve the same results. Our earlier trial (Williams et al., 2024) delivered by school based staff to targeted parents had additional benefits in terms of strengthening relationships between parents and schools, something that predicts good school outcomes (Kim, 2022). It also achieved feedback from school-based staff that it had changed their own behaviour in relation to book sharing with children, something that led to our most recent trial to successfully train classroom support staff in dialogic reading skills and achieve good outcomes (Lothian, 2024).

Limitations

Despite the promising findings, limitations included the relatively small sample size, absence of a control group, and reliance on mainly parent reported data, which may be open to response bias. Another limitation was that follow-up data was collected remotely, resulting in missing observational data and an inability to collect the SOGS II standardised child language data due to COVID-19 restrictions. It was therefore not possible to establish whether the programme demonstrated benefits to child language similar to those reported from a group-based delivery of the programme for cohorts considered at-risk (Cooper et al., 2015; Dowdell et al., 2019; Murray et al., 2016; Williams et al., 2024). The fact that the course was delivered online and that some data was collected online may have influenced the decision of parents to participate. However, 77% of parents who had initially signed up for a group based programme enrolled for the online course and 80% of enrollees completed it and provided follow-up data. This suggests that the online version was acceptable to, and useful for, most parents. Further work is needed to establish for whom the online programme is beneficial. Furthermore, since the study had a limited timescale, follow-up data were collected within a month post-course so it was not possible to report long-term programme impact, despite parents reporting continued use of book sharing immediately post-course.

Conclusion

With growing numbers of children in the UK arriving at school with delays in the linguistic abilities that underpin school readiness (Bercow, 2024) it is important to establish well-evaluated interventions aimed at supporting improved lifelong trajectories. The current study demonstrates that schools can recruit and engage parents of children with language deficits to participate in the ‘Books Together’ parenting programme. The study provides preliminary evidence that online programme delivery yields similar results to group-based delivery of the

same programme (Williams et al., 2024), thereby providing a low-cost intervention that promotes outcomes of public health importance and has meaningful impacts on parenting skills and behaviour and children's social/emotional development (Dowdell et al., 2019; Murray et al., 2016; Williams et al., 2024). Online parent programmes show promise in terms of ease of use, delivery, access and autonomy, and cost and time reductions for families (Breitenstein & Gross, 2013). Consequently, they have the capacity to increase participation rates, expand reach to underserved populations and reduce the resources and costs needed to deliver programme content (Sanders, 2019; Dadds et al., 2019). However further work needs to be done to establish for whom such programmes are effective and to what extent the population recruited are representative of the target population of children arriving at school with speech and language deficits.

This trial does not address the underlying problem of children's speech and language deficits when they start school. Earlier work (Murray et al 2016) showed significant benefits to programme delivery to infants. However it is likely that, given the pressure on early intervention services, this problem is likely to persist and it is valuable to have established that intervention at this age can achieve positive outcomes. Our trials show that schools can recruit parents of children in need of these skills and that children benefit from both school based and online programme delivery. There is a need for children to receive dialogic reading experience both at home and in school and future trials could include both school delivery of the programme to parents, either in groups or online, and use of the skills in work with children in school. Many school based support staff are relatively poorly trained and are working with/supporting some of the most vulnerable pupils. They can be trained to both support parents (either in groups or in support of online programmes) and also use these skills themselves in school with vulnerable pupils which our trial with teaching assistants demonstrated to be effective (Hutchings, et al 2024).

The preliminary positive findings, achieved during the restrictions caused by the COVID-19 pandemic, along with those achieved in the earlier school-based trial (Williams et al., 2024) now justify a larger, more rigorous RCT trial of both versions, live and online, to further explore the ways of supporting children's school readiness skills, particularly those associated with speech and language learning needs that underpin academic success.

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