EARLY YEARS
https://doi.org/10.1080/09575146.2021.1908234

Routledge
Taylor & Francis Group

Evaluating the impact of book gifting on the reading behaviours of parents and young children

Ferhat Tura[a], Clare Wood[b], Rebecca Thompson[c] and Clare Lushey[a]

[a]Nottingham Centre for Children, Young People and Families, Nottingham Trent University, Nottingham, UK; [b]Psychology Department, Nottingham Trent University, Nottingham, UK; [c]Criminology Department, Nottingham Trent University, Nottingham, UK

ABSTRACT

We report an evaluation of a book gifting scheme (the Dolly Parton Imagination Library; DPIL) that targeted families from disadvantaged areas. We considered the impact that length of participation had on children's interest in literacy-related activities, the frequency of parent–child reading interactions, duration of reading, and whether the parents read with their child daily (N = 286). We also compared these families to a group of non-participating families from the same city (N = 197). We found that families registered with DPIL for a year or more reported higher frequencies of parent–child interactions when reading than the non-DPIL group, and were more likely to read with their children on a daily basis than those registered with DPIL for less than a year. We suggest that book gifting schemes need to be long-term to positively influence home literacy environments.

ARTICLE HISTORY
Received 06 November 2020
Accepted 22 March 2021

KEYWORDS
book gifting; home literacy environment; early literacy; parent-child interaction; intervention

Introduction

Many children in the UK fail to meet national targets for language development by the time they complete their first year of school (Law, Charlton, and Asmussen, 2017). This is a significant cause for concern given the impact that oral language abilities have on academic, social and emotional outcomes (e.g., Biemiller 2003; Sénéchal 2006; Duff et al. 2015; Law, Chartlton, and Asmussen 2017).

Shared storybook reading has been shown to be a critical activity for parents to engage with prior to school entry (Sénéchal 2015). It has been linked with vocabulary development, listening comprehension, phonological awareness, morphological knowledge and concepts about print, as well as motivation to read (e.g., Sénéchal 2006; Hamilton et al. 2016; Vaknin-Nusbaum and Nevo 2017; Wood 2002). Research has shown that both the frequency and variety of shared reading are related to both expressive and receptive vocabulary development (Sénéchal and LeFevre 2002, 2014) either at school entry or during the school years. Parents also report enjoying shared storybook reading as an activity that enables them to spend quality time with their children (Audet et al. 2008).

CONTACT Clare Wood Clare.wood@ntu.ac.uk Psychology Department, Nottingham Trent University, 50 Shakespeare Street, NG1 4FB.Nottingham, UK

Supplemental data for this article can be accessed online at https://doi.org/10.1080/09575146.2021.1908234.

Early exposure to books via shared reading is therefore critical in supporting vulnerable children's early language development (Anderson et al. 2019) and later academic outcomes (Duff et al. 2015), as well as being important in cementing relationships between parents and children (Funge, Sullivan, and Tarter 2017). However, children from disadvantaged backgrounds typically own fewer books than their better off peers. Recent figures from the National Literacy Trust (2019) have shown that 9.3% of disadvantaged children do not own any books, compared to 6% of their peers (also see Clark and Picton 2018), and book ownership is linked to reading ability in international studies (Park 2008; Evans et al. 2010). Moreover, there is some evidence that children from low-income homes are exposed to a more limited range of spoken vocabulary in the home (e.g., Hart and Risley 1995, 2003; Gilkerson et al. 2017) although Sperry, Sperry, and Miller (2019) have questioned such claims. We do know that the variety of language that children are exposed to in the early years is related to their vocabulary size by the time they start school (Cartmill et al. 2013).

One approach to addressing the disadvantage that children from low-income homes face with respect to language and literacy has been the introduction of book gifting schemes for pre-school children. These are schemes, typically run by charitable organisations, where families receive free books for their children. Two noteworthy examples in the UK are the BookTrust's Bookstart programme, and the Dolly Parton Imagination Library, which is the focus of this paper.

The Dolly Parton imagination library

The Dolly Parton Imagination Library (DPIL) was first established in Tennessee, USA, in 1996. Every month, DPIL sends high-quality, age-appropriate books (selected each year by a panel of early childhood literacy experts) to children enrolled in the programme from birth to their fifth birthday. At the time of writing, DPIL runs in five countries (USA, Canada, Australia, UK, and Republic of Ireland) and as of January 2021 has distributed over 152 million books in these countries (Imagination Library 2021).

The provision process of the DPIL in the location in which the present study was conducted is as follows. The local health service calls every family expecting a baby in the targeted areas to inform them about free activities available, including DPIL, and asks if they want to register. Families are not informed in detail about the benefits of shared book reading, but they can find brief information (e.g., FAQs) on the local service's website about the DPIL and its benefits (e.g., its impact on education and literacy levels). If they want to register, they receive one book a month, every month, until their fifth birthday. They can register any child up to a four-year-old to receive the books, so siblings receive a book each. However, if the siblings are the same age, they receive the same book. They are not able to choose the books they receive, but the books are age appropriate, and only available in English. Finally, families can also sign up via their health visitors, who might explain the benefits of participating in the DPIL programme.

Previous evaluations of DPIL

There is some evidence that DPIL provision can positively impact shared storybook reading frequency: a few studies have compared frequency of storybook reading before

and after receiving DPIL books and these have shown self-reported increases (e.g., Fong 2007; Harvey 2016; Funge, Sullivan, and Tarter 2017). However, no comparison groups were included in these studies. Importantly, according to the latest meta-analysis on book gifting programmes (including Reach Out and Read, Bookstart and DPIL) by De Bondt, Willenberg, and Bus (2020), there are no studies on DPIL from the UK that had a control group. Gordon (2010) found that parents from lower income families increased the frequency with which they read to their children after registering with DPIL, with 98% increasing the frequency with which they read to their child compared to 69% of middle-to-upper income households, although no explanation for the reasons behind this increase are offered. There is also some evidence that the length of time families were registered with DPIL had an impact on frequency of reading (Ridzi, Sylvia, and Singh 2014) with parents whose children were registered with DPIL for more than four months being more likely to read to their child daily than those whose children were registered for less time. This was the case even after controlling for child's age, parental education level, ethnicity, gender, and whether English was the parents' first language.

Only a small number of previous DPIL studies asked questions about how the parents shared books with their children, but there is some evidence that DPIL may benefit parent-child interactions when reading together. Ridzi, Sylvia, and Singh (2014) found that only 36% of parents whose children were registered with the DPIL for four months or less 'usually' talked about the story and asked their child questions about the story, compared to 55% of parents whose children were registered with the book scheme for longer. Similarly, Thompson, Klemp, and Stinson (2017) found that parents whose children were registered with DPIL had significantly higher literacy interaction scores (i.e., combination of frequency of parent reading with child, age when parent first read to child, number of minutes parent read to child yesterday, number of books in home for child's use, and how often parent takes child to library; see Bracken and Fischel 2008 for details of the Family Reading Survey that Thompson, Klemp, and Stinson 2017 used) compared to parents whose children were not receiving DPIL books. These studies suggest that duration of participation in DPIL could influence parent–child interactions over time. This may be because repeated interactions with the same texts over time stimulate parents to engage their children with the story in new ways with each repeated exposure, in order to maintain their own interest in the reading activity (Martinez and Roser 1985). Similarly, Fagan and Hayden (1988, 47) found that favourite stories appear to serve a function of allowing the children to become more involved in the story and attend to the print. More recently, De Bondt, et al. (2020, 351) hypothesised that 'books "nudge" parents to initiate and maintain book reading routines' to explain 'how the presence of a few age-appropriate books for young children could be an incentive for an early start with book sharing' (see also Thaler and Sunstein 2008).

The present study

This study aimed to examine the impact that DPIL registration had on parent–child reading-related behaviours and other variables known to be linked to children's later linguistic and educational outcomes. Considering the limitations of previous evaluations of DPIL, the present study makes two original contributions to knowledge: (1) having

a large sample size with a comparison group which was not included in previous studies in the UK, and (2) a comprehensive list of variables measured compared to other evaluations of book gifting programmes.

Method

Design

The study had a between groups design, which compared the language and literacy-related behaviours of four groups of parents and their children. These were: 1) those families who received books from the DPIL for less than one year; 2) those who were registered with DPIL for 12–24 months; 3) those who were in the programme for more than two years, and; 4) those not receiving DPIL books. These groups were compared on the following outcomes: the child's level of interest in books, songs and rhymes; the frequency of reading and singing activities in the home; the frequency of child-initiated literacy activities; the frequency of parent–child interactions when sharing books, parental confidence when reading or singing with their preschool children, the duration of typical reading sessions, number of books at home and the frequency of visits to the local library. We also examined whether there was an association between length of registration with the DPIL and whether or not the parents read to their children every day as the theorised goal of the programme was daily reading (Ridzi, Sylvia, and Singh 2014).

Research context

DPIL was implemented in a single UK city with a population of over 300,000 residents. DPIL was offered as part of a wider early childhood programme, which targeted diet and nutrition, social and emotional skills and language and communication abilities. This was supported by a national charity and run by the local health service, to improve children's developmental outcomes prior to school entry. This provision targeted families living in the four most socio-economically disadvantaged inner-city or urban areas of the city.

Participants

A text message with a link to the online questionnaires (see *Data Collection*) was sent to all parents whose children were registered with DPIL, where they had consented to being contacted. DPIL-registered parents along with non-DPIL parents were also invited to participate in this project via links posted on Facebook and Twitter. Some of the DPIL-registered parents were asked to complete the online questionnaires in person when attending local activity sessions or meeting with Family Mentors. Parents whose children were not registered with DPIL were mainly recruited from other areas of the city, but some parents who lived in the intervention areas were also recruited for this group.

In total 557 questionnaires were completed; 355 by parents whose children were registered with the DPIL and 202 by parents whose children were not. However, after excluding inappropriately completed questionnaires and duplicates this was reduced to 512 families that included 315 questionnaires completed by the DPIL-registered parents and 197 questionnaires completed by parents whose children were not registered with

the DPIL. Of the DPIL-registered families, 77 were registered with DPIL for 11 months or less, 100 were registered for between 12 and 24 months, and 109 were registered for 25 months or more. A further 29 cases included missing data which meant it was not possible to allocate them to one of the four groups.

Typically, the DPIL-registered parents were in part-time work (35.1%), married (40.1%), were White British (64.6%), aged between 25 and 34 (57.2%) and spoke English as their first language (80.9%). All DPIL children were under five years old with most aged under three years (88.2%). There was an even split between male (51.8%) and female (48.2%) children in the DPIL-registered group. A slightly higher proportion of the parents who were not registered with DPIL were in part-time work (43.3%), married (66.8%), and were White British (85.4%) and spoke English as their first language (93.0%). In this group, 54.5% were aged between 25 and 34 years. All the children from the non-DPIL group were under five years-old with most aged under three years (77.2%). There was also an even split between males (50.8%) and females (49.2%) in the non-DPIL children group (see Appendix 1).

As anticipated, there were differences between the DPIL-registered families and the non-DPIL families in terms of socio-demographic characteristics (see Appendix 1 for chi-squared tests). Parents whose children were registered with DPIL were more likely to be unemployed (10.1% vs 2.7%), and were more likely to be single than parents whose children were not (28.5% vs 5.3%). Parents whose children were registered with DPIL were more likely to be Black/African/Caribbean/Black British than parents whose children were not (11.2% vs 0.5%) and were more likely to speak English as an additional language (19.1% vs 7.0%).

Data collection

As noted earlier, a questionnaires was developed based on surveys designed by Fong (2007), Ridzi, Sylvia, and Singh (2014); Harvey (2016); and Funge, Sullivan, and Tarter (2017). The aim was to explore the reading routines of parents with their children. In order to measure child interest in books, songs and rhymes, parents were asked two questions: 'how much does your child enjoy reading and looking at books?' and 'how much does your child enjoy joining in with songs and rhymes?' (not at all; a bit; quite a lot; or very much). Frequency of songs and rhymes was assessed with two questions: 'how often do you read to your child?' and 'how often do you and your child sing together?' (not at all; one to two times a month; one to two times a week; three times a week; every day or nearly every day; or more than once a day). To measure frequency of child-initiated reading parents were asked: 'how often does your child ask you read to them?' and 'how often does your child spend looking at books by themselves?' (not at all; one to two times a month; one to two times a week; three times a week; every day or nearly every day; or more than once a day). To explore parent–child interactions during book sharing parents were asked six questions: 'do you ask your child to read with you?', 'do you ask your child questions about the pictures in the book?', 'do you talk about letters?', 'do you talk about what specific words in the book mean?', 'do you talk about what is happening in the story?', or 'do you ask your child questions to see if they understand the story?' with possible responses: always; usually; sometimes; or never. Parents were also asked to state their confidence in sharing books, and singing songs and rhymes with their child (strongly agree; agree; neither agree nor disagree; disagree; or strongly disagree).

Parents were asked 'if you do read to your child, how long does a reading session usually last?' to measure length of a reading session (under 15 minutes; 15 to 30 minutes; or over 30 minutes). Parents were also asked how many non-DPIL books they had at home (none; one to five; six to 10; 11 to 20; more than 20) and how often they visited local libraries (not at all; once or twice a year; once or twice a month; once or twice a week) (see Appendix 2).

Data analysis

One criticism of previous research into the impact of DPIL has been the relative lack of appropriate comparison groups that would support claims surrounding the benefits of DPIL book gifting. We therefore initially recruited two groups of families – one that was registered with DPIL and another that was not. To counter the difference between DPIL-registered and non-DPIL families in terms of socioeconomic characteristics (see Appendix 1), and to enable an exploration of the impact that length of participation in DPIL might have on key outcomes, the DPIL-registered group of families were split into three groups: those registered for less than one year; those registered for between 12 and 24 months, and those registered for more than two years. By comparing these four groups of families, we would be able to better understand the impact of DPIL participation on reading routines and behaviours of DPIL-registered families relative to a 'better off' demographic comparison group, as well as to examine whether consistent participation in DPIL is associated with a positive change in reading-related behaviours of families (see Ridzi et al. 2017 for a similar method). Therefore, the present study was particularly intended to compare the outcomes (see below) of those registered with DPIL for more than two years with those of the non-DPIL group. Being in the DPIL for at least two years was deemed to be sufficient to narrow the possible gap between the DPIL-registered group and the 'better off' group as previous research (Ridzi, Sylvia, and Singh 2014) found that participants who enrolled in the DPIL for longer than four months reported significantly higher frequencies of reading than those enrolled for four months or less (see also Ridzi et al. 2017).

In terms of outcomes, the individual questions asked in the questionnaire (see Appendix 2) were first combined to provide overarching scores which indicated the relative performance of the families in relation to: the children's interest in books, songs and rhymes; frequency of parents reading and singing with their child; frequency of child-initiated reading activity; the frequency of the parent–child interactions during shared book reading; parental confidence in reading and singing with their child; duration of reading sessions; how many (non-DPIL) books were owned; and, how often the family visited the local library. Details of which items were combined and the internal reliability estimates of these scores based on this study are in Appendix 3. The rationale for focusing on these outcomes was because they have been shown in previous studies to be linked to developmental outcomes for children in relation to language and academic skills (e.g., Park 2008; Wood 2002). The items related to songs and rhymes were included because the EPPE (e.g., Sylva et al. 2008) found that teaching children songs or nursery rhymes showed a significant positive impact on their language scores at school entry after controlling for other factors.

With regards to quantitative data analysis methods, we used Kruskal-Wallis tests to determine whether were statistically significant differences between the four groups on the aforementioned variables. We used this method because normality and homogeneity

of variance assumptions of one-way ANOVA were not met. We did not use Bonferroni correction for original Kruskal-Wallis tests because the present study is restricted to planned comparisons in which case no correction is suggested (Armstrong 2014). In addition, after each Kruskal-Wallis test, Dunn's post hoc tests were carried out on each pair of groups where we reported Bonferroni adjusted p-values to avoid Type I error.

Finally, we were interested in whether or not duration of participation in DPIL was associated more specifically with the parents' tendency to read with their children every day as the theorised goal of the programme was daily reading (Ridzi, Sylvia, and Singh 2014). To address this, we divided the DPIL-registered parents into two groups: those enrolled for 11 months or less (n = 71) and those enrolled for more than a year (n = 192). We then adopted logistic regression to explore whether duration in the programme was associated with parents' tendency to read with their children on a daily basis whilst controlling for socio-demographic characteristics of parents and children such as, parent ethnicity, employment and marital status; child age and sex; and whether English is the first language.

Results

Frequency of reading and singing with child and child-initiated reading

The present study examined whether there were differences between the four groups of families in terms of frequency of reading and singing with children and child-initiated reading. It will be recalled that the non-DPIL families appeared to be more socio-economically advantaged than their DPIL-registered peers. We found that non-DPIL children were more likely to initiate reading activities (p = .01) and had parents who read and sang to them more frequently (p = .034) compared to the families who had received DPIL books for just 0–11 months. There were, however, no significant differences between the non-DPIL families and the families registered with DPIL for a year or more, perhaps indicating that continued registration brought the DPIL families more in line with their better-off counterparts with respect to these behaviours. In particular, the longer the children were registered with DPIL, the more frequently the children were reported to initiate reading activities with their parents (see Table 1).

Interactions when sharing books

One of the aims of the present study was to examine whether there were any differences between the four groups in terms of parent-child interactions during shared storybook reading. First, we present descriptive statistics on each of the interactions identified in the questionnaires. Table 2 suggests that asking children questions about the pictures in the book was more common among parents (always: 55.5%) followed by talking about what is happening in the story (always: 39.7%).

We then checked whether there were statistically significant differences between the four groups of families in relation to parent–child interactions during reading sessions. We found that parents whose children were not registered with the DPIL reported interacting with their children significantly less than parents whose children received DPIL books for more than 12 months (p = .017) and for more than two years (p < .0005). There were also

Table 1. Comparison of four groups of children/parents in terms of reading routines and behaviours, with Post hoc analyses.

Reading routine and behaviours	Group	Sample size	Median (IQR)*	*H*	Post hoc analysis with Bonferroni adjusted p-value
Child interest in books, songs and rhymes	Non-DPIL	186	8 (7–8)	$H = 2.221$	
	0–11 months	74	8 (6–8)	df = 3 ($p = .528$)	
	12–24 months	100	8 (6–8)		
	25 + months	109	8 (7–8)		
Frequency of reading and singing with child	Non-DPIL	185	11 (9–11)	$H = 8.119$	0–11 months vs Non-DPIL, $p = .034$
	0–11 months	75	10 (9–11)	df = 3	
	12–24 months	99	10 (9–11)	($p = .044$)	
	25 + months	105	10 (9–11)		
Frequency of child-initiated reading	Non-DPIL	185	10 (9–11)	$H = 17.436$	0–11 months vs Non-DPIL, $p = .010$
	0–11 months	70	9 (5–10.25)	df = 3	0–11 months vs 12–24 months, $p = .007$
	12–24 months	98	10 (8–11)	($p = .001$)	0–11 months vs 25 + months, $p < .0005$
	25 + months	104	10 (9–11)		
Interactions when sharing books	Non-DPIL	181	15 (13–18)	$H = 39.881$	0–11 months vs 12–24 months, $p = .001$
	0–11 months	70	14 (10–19)	df = 3	0–11 months vs 25 + months, $p < .0005$
	12–24 months	98	17 (14–21)	($p < .0005$)	Non-DPIL vs 12–24 months, $p = .017$
	25 + months	105	19 (15–22)		Non-DPIL vs 25 + months, $p < .0005$
Parent confidence in reading and singing	Non-DPIL	187	10 (9–10)	$H = 2.103$	
	0–11 months	76	10 (8–10)	df = 3	
	12–24 months	97	10 (9–10)	($p = .551$)	
	25 + months	108	10 (9–10)		
Length of a reading session	Non-DPIL	187	1 (1–2)	$H = 9.231$	0–11 months vs 25 + months, $p = .049$
	0–11 months	67	1 (1–2)	df = 3	
	12–24 months	76	2 (1–2)	($p = .026$)	
	25 + months	91	2 (1–2)		
Number of books at home	Non-DPIL	187	5 (5–5)	$H = 33.856$	0–11 months vs Non-DPIL, $p < .0005$
	0–11 months	74	5 (3–5)	df = 3	25 + months vs Non-DPIL, $p = .011$
	12–24 months	99	5 (4–5)	($p < .0005$)	12–24 months vs Non-DPIL, $p = .016$
	25 + months	108	5 (4–5)		
Frequency of local library visit	Non-DPIL	187	3 (2–3)	$H = 10.186$	No statistically significant adjusted p-values
	0–11 months	75	2 (1–3)	df = 3	
	12–24 months	99	2 (1–3)	($p = .017$)	
	25 + months	108	2 (1–3)		

** IQR: Interquartile range*

earch in Reading, 25, 241–258.

significant increases in interaction scores across the three DPIL-registered groups, suggesting that duration of registration was linked to the frequency of the parent-child interactions during shared book reading (see Table 1).

Table 2. Descriptive statistics about parent-child interactions during reading sessions.

	Do you ask your child to read with you?	Do you ask your child questions about the pictures in the book?	Do you talk about letters?	Do you talk about what specific words in the book mean?	Do you talk about what is happening in the story?	Do you ask your child questions to see if they understand the story?
Percentage						
Always	32.7	55.5	27.9	22.8	39.7	29.3
Usually	22.6	27.0	21.0	18.1	24.7	22.6
Sometimes	32.1	13.9	31.8	38.1	23.8	29.7
Never	12.6	3.6	19.3	20.9	11.8	18.4
Total	468	467	466	464	466	461

Length of reading session

The present study also aimed to assess whether length of reading sessions differed between the groups. Our results suggested that children who were registered with DPIL for more than two years had longer reading sessions than children who were registered for less than a year ($p = .049$).

Number of books at home and frequency of library visits

We found that the non-DPIL families had significantly more books at home than all three DPIL-registered groups ($H(3) = 33.856$, $p < .0005$). Conversely, we found a significant main effect of DPIL registration status on library visits ($H(3) = 10.186$, $p = .017$), but post-hoc analyses were not significant, suggesting that this effect was not reliable.

Effect of duration of participation in DPIL on daily reading

The final aim of the study was to examine whether duration of participation in DPIL was associated specifically with the parents' tendency to read with their children every day as the theorised goal of the programme was daily reading (Ridzi, Sylvia, and Singh 2014). Chi-squared analysis found a statistically significant association between length of registration with the DPIL and frequency of reading. In other words, parents whose children were enrolled in the DPIL for a year or more were more likely to read to their children on a daily basis than parents whose children were enrolled in the DPIL for 11 months or less (see Table 3).

To examine whether the aforementioned association persisted when socio-demographic characteristics of parents and children (i.e., parent ethnicity, employment and marital status; child age and sex; and whether English is the first language) were controlled, we conducted a logistic regression analysis. We found that parents whose children were registered with the DPIL for more than a year were more likely to read to their child daily than parents with shorter registrations, even after controlling for socio-demographic characteristics of parents and children (see Table 4). Further, unemployed parents were less likely to read to their children daily compared to parents who had a full-time job (χ^2 (8) = 22.469, $p = .004$, −2 log likelihood = 249.899).

Discussion

This study explored whether there were differences in reading routines and behaviours between the DPIL-registered families (three groups) living in socio-economically

disadvantaged inner-city or urban areas in a UK city and non-DPIL families living in mostly other areas of the same city. We found that although when they were initially registered with the DPIL (i.e., 0–11 months) such families reported reading and singing with their children less frequently than their more advantaged peers (i.e., non-DPIL group), and the children were initiating literacy-related activities less often, the two groups of families who had been registered with DPIL for a year or more reported higher levels of activity which put them on a par with the non-DPIL families.

This study makes an original contribution to the literature by investigating aspects of the book-sharing interactions between parents and children in more detail than has been reported previously. The two most common interactions were asking children about the pictures in the book and talking about what is happening in the story. In addition, DPIL groups registered with the programme for a year or more reported more frequent interaction when sharing books than the non-DPIL families. In other words, DPIL-registered parents engaged their children with the content of the story or focused their attention on concepts about print. This result might be related to parents' knowledge about the influence of shared reading on their child's education and language skills (De Bondt, Willenberg, and Bus 2020). These findings are in line with those of Thompson, Klemp, and Stinson (2017), who reported that parents whose children were registered with the DPIL scored significantly higher on literacy interactions than parents whose children were not registered (see also De Bondt, Willenberg, and Bus 2020).

Together these findings suggest that DPIL book-gifting does appear to be a mechanism that can not only increase the frequency of reading-related behaviours, but can also support improvements in parent–child interactions over time. In addition, more frequent interactions around sharing books are likely to enhance children's language comprehension. One likely mechanism for these results could be the impact of repeated reading. That is, in households with relatively few books, it is likely that the DPIL texts will become children's particular favourites. Although they receive a new book every month, the limited frequency of those new books means that repeated reading is likely to occur. This, in turn, is likely to stimulate parents to engage their children in more of a discussion about what is happening in the story, and aspects of the vocabulary covered within the book, in order to make book sharing more interesting for the adult. Previous research on repeated reading also noted that 'favourite stories appear to serve a function of allowing the children to become more involved in the story' (Fagan and Hayden 1988, 47). More recently, De Bondt,

Table 3. Contingency table for registration duration in DPIL and frequency of reading.

Duration in the programme	11 months or less		12 months or more		Chi-square test*
Frequency of reading	Sample Size	% Within Group	Sample Size	% Within Group	$p = .007$
					Phi = .165
Less than every day	23	32.4	33	17.2	Adjusted residuals in parentheses
	(2.7)		(−2.7)		
Every day	48	67.6	159	82.8	
	(−2.7)		(2.7)		
Total	71	100.0	192	100.0	

* *Preliminary Chi-square analysis of frequency of reading and length of registration with the DPIL variables resulted that 15 cells (50.0%) had expected count less than 5. Therefore, we collapsed the categories of these two variables and eventually had frequency of reading variable with two categories (Every day and less than every day) and length of registration with the DPIL variable with two categories (11 months or less and 12 months or more).*

Table 4. Logistic regression analysis considering factors which influenced whether or not the children were read to every day.

							95% C.I.for Exp (β)	
Explanatory variables	β	S.E.	Wald	df	p-value	Exp (β)	Lower	Upper
Duration in the programme (11 months or less)	1.053	.377	7.813	1	.005	2.867	1.370	6.002
Parent ethnicity (White)	−.350	.413	.718	1	.397	.704	.313	1.584
Parent employment status (Full time)								
Part time	−.243	.545	.198	1	.656	.785	.270	2.284
Unemployed	−1.079	.496	4.737	1	.030	.340	.129	.898
Parent marital status (Married)	−.318	.339	.881	1	.348	.727	.374	1.414
Child age (3 and over)	.501	.367	1.864	1	.172	1.650	.804	3.387
Child sex (Female)	−.270	.328	.675	1	.411	.764	.401	1.453
English is a first language (Yes)	−.116	.503	.053	1	.817	.890	.332	2.385

Willenberg, and Bus (2020) argued that even a few age-appropriate books in the home may serve as a 'nudge' for improving reading-related behaviours of families. Moreover, previous research suggests that the language used in books or during shared reading is more complex than the language used during normal conversation or free play (Hayes and Ahrens 1988; Crain-Thoreson, Dahlin, and Powell 2001).

The study also aimed to test whether there were differences between the four groups in relation to length of reading sessions. Families registered in DPIL for more than two years engaged in reading sessions that were significantly longer than those who had been registered for one year or less. This difference in duration of reading sessions also supports the earlier interpretation that parents are engaging their children in more discussion around the texts during shared storybook reading, rather than simply reading the book from beginning to end, and then ending the activity.

There was no evidence of any impact of DPIL registration status on either the children's interest in books, songs and rhymes, or in levels of parental confidence. This would suggest that regardless of background all the children in the study had broadly comparable levels of interest in literacy-related pre-school activities and resources, even though some of these children had less access to books, as another finding was that the children in the non-DPIL group had significantly more books at home than all three of the DPIL-registered groups. This underscores the importance of capitalizing on children's early interest in books and language by supplying them with resources and showing parents how to best use them with their children, before differences in abilities become established.

Specifically, the study aimed to examine whether duration of participation in the programme affected reading frequencies of DPIL-registered families. We found that being registered with DPIL for more than one year was able to predict whether or not a parent reported that they read daily with their child, and this effect remained after factoring in the influence of parents' ethnicity, employment status, marital status, the age of the child, the child's gender and whether or not English was their first language. Ridzi, Sylvia, and Singh (2014) similarly found that parents whose children were registered with the DPIL for more than four months were more likely to read to their children daily than parents whose children were registered with the book gifting scheme for four months or less. However, whether or not the parent was unemployed was an influence on the data, with unemployed parents being less likely to read to their children everyday than employed parents. This finding is similar to that reported by Anderson et al. (2019), who reported that parents from higher income households were

more likely to read to their children more often than those from lower income households. It would be worth exploring why unemployed parents do not read to their children as much as employed parents in detail via interviews or ethnographic methods.

It is noteworthy that the results reported in this study are more positive than those reported for other book gifting schemes in the UK. For example, Mooney, Winter, and Connolly (2016) evaluated the Letterbox Club that ran in Northern Ireland to improve literacy skills amongst children aged 7–11 years in foster care. Unlike DPIL, the programme sends six parcels of books (each including two books) over a six-month period. This much shorter time frame might be one of the reasons why Mooney, Winter, and Connolly (2016) found no evidence that the programme had an effect on the children's literacy skills or enjoyment of reading. A process analysis of that study revealed a lack of carer/child levels of engagement with the programme as the main reason for no effect (Roberts, Winter, and Connolly 2017). Another important difference between our study and that of Mooney et al. is the age of the children being targeted; in the city we studied DPIL sent books to children from birth to their fifth birthday, whereas the Letter Box Club targeted those aged 7–11 years.

A more comparable programme in the UK is Bookstart. In this BookTrust run scheme, the Bookstart pack is delivered to parents/carers at the first-year health check, and the bookstart+ pack at the second. These packs include two books. Receiving two books once in a year compared to one book each month over a four-year period (i.e., DPIL) might explain why there was no significant effect of Bookstart+ on parental attitudes to shared book reading (O'Hare and Connolly 2014), whereas we did find an effect on this during the DPIL evaluation.

Overall, DPIL appears to have advantages over other book-gifting schemes. Particularly, the fact that children receive books over an extended (up to four-year) period seems to be the most important mechanism underlying the significant relationships between the programme and the outcomes measured here. We found that the longer families participated in the programme, the more parents had interactions with their children whilst reading a book, the longer reading sessions they had, and the more they read to their children on a daily basis. Considering the significant differences between the DPIL-registered families and non-DPIL families in terms of socioeconomic characteristics, all these findings suggest that a book gifting scheme like DPIL could considerably enhance disadvantaged children's love of books, parent–child interactions and those children's future academic outcomes.

Limitations and future research

There are limitations to the study that should be acknowledged. Firstly, we used self-report questionnaires to evaluate the programme and so the study is vulnerable to 'social desirability bias', which is a tendency to answer questions in a way that will be viewed favourably by others instead of answering truthfully (Arnold and Feldman 1981; Bryman 2016). Future studies might incorporate additional measures for assessing reading-related behaviours of families, such as children's report (Evans and Hulak 2020) or observation.

Secondly, no information was obtained about parental education level and siblings (e.g., absence/presence of siblings and their age) to keep the questionnaires short. Future research could include more socio-demographic variables in the analysis. Finally, it is important to note that the questions on child interest and parental confidence do not fully measure these concepts. Future research could use observational methods to triangulate self-reports of interest and confidence during shared reading activities.

Conclusion

This study analysed whether the children living in disadvantaged inner-city or urban areas of a UK city benefited from the DPIL programme. It has made a significant contribution to knowledge by comparing two groups of families (i.e., DPIL-registered vs non-DPIL registered) in terms of reading-related behaviours given the limited number of previous studies that had a comparison group in the UK context (De Bondt, Willenberg, and Bus 2020). In addition, in the programme evaluation studies on book gifting, the most common questions are on parental attitudes towards book reading and child interest in book reading. By contrast, this study with its large sample size compared to previous evaluations had data on frequency, duration and aspect of the book-sharing interaction between parents and children. We found that the longer the DPIL-registered families stayed in the programme, the more they changed their reading behaviours, which also meant that they narrowed the gap between them and their better-off counterparts in the city. We recommend exploring why unemployed parents do not read to their children as much as employed parents in detail via interviews and that unemployed parents are targeted with information about the benefits of daily shared reading.

Author note

Ferhat Tura https://orcid.org/0000-0002-6683-2438; Clare Wood https://orcid.org/0000-0003-1492-6501; Clare Lushey https://orcid.org/0000-0003-1839-8611.

Ferhat Tura, Nottingham Centre for Children, Young People and Families, Nottingham Trent University; Clare Wood, Psychology Department, Nottingham Trent University; Rebecca Thompson, Criminology Department, Nottingham Trent University; Clare Lushey, Nottingham Centre for Children, Young People and Families, Nottingham Trent University.

The authors gratefully acknowledge the contributions of Carrie Paechter and Jason Pandya-Wood in the preparation of this manuscript, and the support of the local partnership programme that was responsible for the book gifting scheme evaluated here, and who commissioned the evaluation of the local partnership programme as a whole, of which this report is one aspect.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This evaluation was funded by Small Steps, Big Changes.

ORCID

Ferhat Tura http://orcid.org/0000-0002-6683-2438
Clare Wood http://orcid.org/0000-0003-1492-6501
Clare Lushey http://orcid.org/0000-0003-1839-8611

References

Anderson, K. L., T. S. Atkinson, E. A. Swaggerty, and K. O'Brien. 2019. "Examining Relationships between Home-Based Shared Book Reading Practices and Children's Language/Literacy Skills at Kindergarten Entry." *Early Child Development and Care* 189 (13): 2167–2182. doi:10.1080/03004430.2018.1443921.

Armstrong, R. A. 2014. "When to Use the Bonferroni Correction." *Ophthalmic and Physiological Optics* 34 (5): 502–508. doi:10.1111/opo.12131.

Arnold, H. J., and D. C. Feldman. 1981. "Social Desirability Response Bias in Self-Report Choice Situations." *Academy of Management Journal* 24 (2): 377–385. doi:10.2307/255848.

Audet, D., M. A. Evans, K. Williamson, and K. Reynolds. 2008. "Shared Book Reading: Parental Goals across the Primary Grades and Goal-Behaviour Relationships in Junior Kindergarten." *Early Education and Development* 19 (1): 112–137. doi:10.1080/10409280701839189.

Biemiller, A. 2003. "Vocabulary: Needed if More Children are to Read Well." *Reading Psychology* 24 (3–4): 323–335. doi:10.1080/02702710390227297.

Bracken, S. S., and J. E. Fischel. 2008. "Family Reading Behaviour and Early Literacy Skills in Preschool Children from Low-income Backgrounds." *Early Education and Development* 19 (1): 45–67. doi:10.1080/10409280701838835.

Bryman, A. 2016. *Social Research Methods*. New York: Oxford University Press.

Cartmill, E. A., B. F. Armstrong, L. R. Gleitman, S. Goldin-Meadow, T. N. Medina, and J. C. Trueswell. 2013. "Quality of Early Parent Input Predicts Child Vocabulary 3 Years Later." *Proceedings of the National Academy of Sciences of the United States of America* 110 (28): 11278–11283. doi:10.1073/pnas.1309518110.

Clark, C., and I. Picton (2018). *Book Ownership, Literacy Engagement and Mental Wellbeing*. "London: National Literacy Trust". Accessed 2 March 2021. https://literacytrust.org.uk/research-services/research-reports/book-ownership-literacy-engagement-and-mental-wellbeing/

Crain-Thoreson, C., M. P. Dahlin, and T. A. Powell. 2001. "Parent-child Interaction in Three Conversational Contexts: Variations in Style and Strategy." *New Directions for Child and Adolescent Development* 2001 (92): 23–38. doi:10.1002/cd.13.

De Bondt, M., I. A. Willenberg, and A. G. Bus. 2020. "Do Book Giveaway Programs Promote the Home Literacy Environment and Children's Literacy-Related Behavior and Skills?" *Review of Educational Research* 90 (3): 349–375. doi:10.3102/0034654320922140.

Duff, F. J., G. Reen, K. Plunkett, and K. Nation. 2015. "Do Infant Vocabulary Skills Predict School-Age Language and Literacy Outcomes?" *The Journal of Child Psychology and Psychiatry* 56 (8): 848–856. doi:10.1111/jcpp.12378.

Evans, M. A., and L. Hulak. 2020. "Learning to Read at Home: Kindergarten Children's Report in Relation to Observed Parent Behaviour." *Early Childhood Research Quarterly* 50 (2): 38–45. doi:10.1016/j.ecresq.2018.09.010.

Evans, M. D. R., J. Kelley, J. Sikora, and D. J. Treiman. 2010. "Family Scholarly Culture and Educational Success: Books and Schooling in 27 Nations." *Research in Social Stratification and Mobility* 28 (2): 171–197. doi:10.1016/j.rssm.2010.01.002.

Fagan, W. T., and H. R. Hayden. 1988. "Parent-Child Interaction in Favourite and Unfamiliar Stories." *Literacy Research and Instruction* 27 (2): 47–55. doi:10.1080/19388078809557934.

Fong, G. F. 2007. *A Report on Hawaii's Imagination Library Programme*. Honolulu, HI: University of Hawaii' Centre on the Family.

Funge, S. P., D. J. Sullivan, and K. Tarter. 2017. "Promoting Positive Family Interactions: Evaluating a Free Early Childhood Book Distribution Programme." *Early Childhood Education Journal* 45 (5): 603–611. doi:10.1007/s10643-016-0815-9.

Gilkerson, J., J. A. Richards, S. F. Warren, J. K. Montgomery, C. R. Greenwood, D. Kimbrough Oller, J. H. L. Hansen, and T. D. Paul. 2017. "Mapping the Early Language Environment Using All-Day Recordings and Automated Analysis." *American Journal of Speech and Language Pathology* 26 (2): 248–265. doi:10.1044/2016_AJSLP-15-0169.

Gordon, T. D. (2010). "*Celebrating Little Dreamers: An Analysis of the First 18 Months of Dolly Parton's Imagination Library in Middleton, Ohio*". Ohio: Middletown Community Foundation. Accessed 2 March 2021. https://drive.google.com/file/d/0BxGQ1Z0VwA4tNmpQamxrNmg2Rjg/vie

Hamilton, L. G., M. E. Hayiou-Thomas, C. Hulme, and M. J. Snowling. 2016. "The Home Literacy Environment as a Predictor of the Early Literacy Development of Children at Family-Risk of Dyslexia." *Scientific Studies of Reading* 20 (5): 401–419. doi:10.1080/10888438.2016.1213266.

Hart, B., and T. R. Risley. 1995. *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD: Paul H. Brookes.

Hart, B., and T. R. Risley. 2003. "The Early Catastrophe: The 30 Million Word Gap." *American Educator* 27 (1): 4–9.

Harvey, A. 2016. "Improving Family Literacy Practices." *SAGE Open* 6 (3): 1–7. doi:10.1177/2158244016669973.

Hayes, D. P., and M. G. Ahrens. 1988. "Vocabulary Simplification for Children: A Special Case of 'Motherese'?" *Journal of Child Language* 15 (2): 395–410. doi:10.1017/S0305000900012411.

Law, J., J. Chartlton, and K. Asmussen (2017). "*Language as a Child Wellbeing Indicator*". London: Early Intervention Foundation. Accessed 2 March 2021. https://www.eif.org.uk/files/pdf/language-child-wellbeing-indicator.pdf

Library, I., (2021). "Dolly Parton's Imagination Library, United Kingdom." Accessed March 2, 2021. https://imaginationlibrary.com/uk/

Martinez, M., and N. Roser. 1985. "Read It Again: The Value of Repeated Readings during Storytime." *The Reading Teacher* 38 (8): 782–786. Accessed 2 March 2021. www.jstor.org/stable/20198926

Mooney, J., K. Winter, and P. Connolly. 2016. "Effects of A Book Gifting Programme on Literacy Outcomes for Foster Children: A Randomised Controlled Trial Evaluation of the Letterbox Club in Northern Ireland." *Children and Youth Services Review* 65 (2016): 1–8. doi:10.1016/j.childyouth.2016.03.009.

National Literacy Trust. 2019. "Gift of Reading: Children's Book Ownership in 2019". London: National Literacy Trust. Accessed 2 March 2021. https://literacytrust.org.uk/research-services/research-reports/gift-reading-childrens-book-ownership–2019/

O'Hare, L., and P. Connolly. 2014. "A Cluster Randomised Controlled Trial of "Bookstart+": A Book Gifting Programme." *Journal of Children's Services* 9 (1): 18–30. doi:10.1108/JCS-05-2013-0021.

Park, H. 2008. "Home Literacy Environments and Children's Reading Performance: A Comparative Study of 25 Countries." *Educational Research and Evaluation* 14 (6): 489–505. doi:10.1080/13803610802576734.

Ridzi, F., M. Sylvia, X. Qiao, and J. Craig. 2017. "The Imagination Library Programme and Kindergarten Readiness: Evaluating the Impact of Monthly Book Distribution." *Journal of Applied Social Science* 11 (1): 11–24. doi:10.1177/1936724416678023.

Ridzi, F., M. R. Sylvia, and S. Singh. 2014. "The Imagination Library Programme: Increasing Parental Reading Through Book Distribution." *Reading Psychology* 35 (6): 548–576. doi:10.1080/02702711.2013.790324.

Roberts, J., K. Winter, and P. Connolly. 2017. "The Letterbox Club Book Gifting Intervention: Findings from a Qualitative Evaluation Accompanying a Randomised Controlled Trial." *Children and Youth Services Review* 73 (2017): 467–473. doi:10.1016/j.childyouth.2016.11.016.

Sénéchal, M. 2006. "Testing the Home Literacy Model: Parent Involvement in Kindergarten Is Differentially Related to Grade 4 Reading Comprehension, Fluency, Spelling, and Reading for Pleasure." *Scientific Studies of Reading* 10 (1): 59–87. doi:10.1207/s1532799xssr1001_4.

Sénéchal, M. 2015. "Young Children's Home Literacy Experiences." In *The Oxford Handbook of Reading*, edited by A. Pollatsek and R. Treiman, 397–414, Oxford: Oxford University Press.

Sénéchal, M., and J. LeFevre. 2002. "Parental Involvement in the Development of Children's Reading Skill: A Five-Year Longitudinal Study." *Child Development* 73 (2): 445–460. doi:10.1111/1467-8624.00417.

Sénéchal, M., and J. LeFevre. 2014. "Continuity and Change in the Home Literacy Environment as Predictors of Growth in Vocabulary and Reading." *Child Development* 85 (4): 1552–1568. doi:10.1111/cdev.12222.

Sperry, D. E., L. L. Sperry, and P. J. Miller. 2019. "Re-examining the Verbal Environments of Children from Different Socioeconomic Backgrounds." *Child Development* 90 (4): 1303–1318. doi:10.1111/cdev.13072.

Sylva, K., E. Melhuish, P. Sammons, I. Siraj-Blatchford, and B. Taggart (2008). "Effective Pre-school and Primary Education 3–11 Project (EPPE 3–11)" *Final report from the Primary Phase: Pre-school, school and family influences on children's development during Key Stage 2 (Age 7–11)*. Accessed 15 March 2021. https://discovery.ucl.ac.uk/id/eprint/10005311/1/Taggart2008Finalreport1.pdf

Thaler, R., and C. Sunstein. 2008. *Nudge: Improving Decisions about Health, Wealth and Happiness*. London: Yale University Press.

Thompson, A. M., H. Klemp, and A. E. Stinson. 2017. "Effect of the Imagination Library on Caregiver-Child Literacy Interactions and School Readiness: Findings from Two Quasi-Experimental Propensity Score Studies." *Journal of Children and Poverty* 23 (1): 19–40. doi:10.1080/10796126.2016.1187587.

Vaknin-Nusbaum, V., and E. Nevo. 2017. "A Joint Interactive Storybook Intervention Programme for Preschool and Kindergarten Children." *Reading Psychology* 38 (3): 231–261. doi:10.1080/02702711.2016.1258376.

Wood, C. 2002. "Parent-child Activities Can Affect the Development of Literacy Skills." *Journal of Research* 25: 241-258.