

An Exploration of *Ready, Set, Share A Book!* Intervention for Enhancing Parent Book Sharing with Infants and Toddlers

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Abstract

Shared book reading is a well-established intervention for promoting child language and early development. Although most shared reading interventions have included children 3 years of age and older, recent evidence demonstrates dialogic strategies can be adapted for parents of infants and toddlers. The current study examines gains in parent book-sharing skills during a brief, structured intervention. Parent—child dyads participated in an 8-week book-sharing intervention, *Ready, Set, Share A Book!*, designed for 12- to 36-month-old children. Parent book-sharing skills were assessed at baseline, weekly during the intervention, and at intervention end. Parents demonstrated significant gains in book-sharing skills from baseline to end of intervention, and results also indicate immediate skill gains in response to instruction. Furthermore, improvement in book-sharing skills at end of intervention was evident within the same book. The current study extends previous evidence for the benefit of a brief, low intensity, targeted intervention to enhance parent book-sharing interactions with infants and toddlers. Future directions for research and implications for practice are discussed.

 $\textbf{Keywords} \ \ Shared \ reading \cdot Book \ sharing \cdot Dialogic \ reading \cdot Preliteracy \cdot Parent-child \ interaction \cdot Parent \ coaching \cdot Infant \cdot Toddler$

Introduction

Shared book reading is a critical vehicle for language and early literacy promotion (Hargrave & Senechal, 2000; Hutton et al., 2015; National Early Literacy Panel, 2008) and parents are encouraged to begin to share books with infants as soon as possible to promote healthy development (Council on Early Childhood et al., 2014). Interventions that teach parents to use high-quality (dialogic) reading strategies are a widely recognized, evidence-based approach for preschool and school-aged children (for meta-analyses see Dowdall et al., 2020; Heidlage et al., 2020); yet programs that target

children younger than 3 years of age have been limited. Importantly, recent work demonstrates the potential of brief, structured, parent-implemented book-sharing intervention for parents of infants and toddlers (Cooper et al., 2014; Murray et al., 2016; Salley et al., 2022; Vally et al., 2015). This parent-implemented approach is intended to equip parents to use evidence-based book-sharing skills during their everyday book reading interactions with infants/toddlers, with downstream effects for child language and preliteracy.

Book-Sharing with Infants and Toddlers

Early book sharing is meant to engage the young child as an active communication partner (Reese et al., 2010; Whitehurst et al., 1988). For preschool and school-aged children the focus is on a book's words, pictures, and story; in contrast, for infants and toddlers the focus is establishing an engaging, language-rich context to create communication opportunities, rather than focusing on reading words on a page (Ezell & Justice, 2005). For infants and toddlers, the book-sharing context is a particularly powerful vehicle for language promotion and for enriching the early language environment (Logan et al., 2019). Compared to other daily

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routines, book sharing more naturally elicits parent use of language-rich interactions and bouts of joint attention that support child vocabulary growth (Fletcher & Reese, 2005; Snow & Goldfield, 1983; Wells, 1985). Even a single reading of a book can promote new word-learning (Senechal & Cornell, 1993). Importantly, the age at which parents begin to book share with their children impacts later language development, with frequency of book sharing during the first year of life predicting later expressive vocabulary during the second year and beyond (Karrass & Braungart-Rieker, 2005; Richman & Colombo, 2007). Evidence also shows that the quantity and quality of early book sharing is positively related to activation in regions of the brain that support child language, emerging literacy, semantic processing, and social-emotional skills (Hutton et al., 2015).

For preschool and school-aged children, the benefits of shared book reading intervention for child language are well established (for meta-analyses see Dowdall et al., 2020; Heidlage et al., 2020; National Early Literacy Panel, 2008; for reviews see Scarborough & Dobrich, 1994). Importantly, interventions that target the quality of parents' book sharing directly benefit child outcomes, with medium effects for improving language, emergent literacy and reading for school-aged children (Bus et al., 1995), and medium to large effects on communication/language for preschoolers (Dowdall et al., 2020; Heidlage et al., 2020; U.S. Department of Education IES What Works Clearinghouse, 2007, 2015). Equally important, a growing body of research demonstrates the broader benefits of book sharing for enhancing child attention and cognitive outcomes (Brown et al., 1986; Cline & Edwards, 2016; Shahaeian et al., 2018; Vally et al., 2015; Whitehurst et al., 1994), social emotional outcomes (Murray et al., 2016; Yont et al., 2003), preliteracy and school readiness (Bus et al., 1995; Theriot et al., 2003).

Although the majority of research has focused on frequency of book sharing, more frequent shared reading may not directly translate to high-quality shared reading. Furthermore, differences in the success and quality of book sharing also predict later child vocabulary (DeBaryshe, 1995; Malin et al., 2014). Maternal book-sharing style may be influenced by education level (Ninio, 1980), cultural heritage or socioeconomic status (Anderson-Yockel & Haynes, 1994), parent age and experience (Britto et al., 2011), maternal-child responsiveness (Bus & van Ijzendoorn, 1995) and child language ability (Kucirkova et al., 2016). Evidence also demonstrates individual differences among parent-child dyads in their enjoyment and affective engagement during book-sharing interactions (Bergin, 2001; Bergin et al., 1994; Frosch et al., 2001). Because book-sharing style and practices vary based on maternal and child factors, caregivers may need instruction on how best to engage their child while book-sharing and how to employ language facilitation strategies during shared reading. Given the link between early parent—child book-sharing interactions and later child language development, parent instruction in high-quality book sharing is a key opportunity for promoting more optimal child outcomes.

Ready, Set, Share A Book! Intervention

Family-centered care and parent-implemented intervention (Dunst, 2002; Dunst et al., 2007) are designed to allow an interventionist to coach parents to learn and use evidencebased strategies to promote their child's development (Kaiser & Hancock, 2003). Compared to clinician-implemented interventions, parent-implemented interventions yield greater improvement in child outcomes (DeVeney & Hagaman, 2016; Gibbard et al., 2004). Parents are able to successfully carry out a variety of language interventions for their young children (Akemoglu & Meadan, 2018), and parentimplemented interventions for language have significant, positive effects on both receptive and expressive language for toddlers and young children (Roberts & Kaiser, 2011). However, successful parent-implemented intervention necessitates teaching prerequisite skills, instructing regularly, requiring mastery, and emphasizing broad generalization (Ellis et al., 1991). To apply this approach to book-sharing intervention with very young children, we have developed Ready, Set, Share A Book!. This intervention is a systematic, developmentally-sequenced, downward extension of dialogic strategies for infants/toddlers younger than 3 years, which is designed to support parents' use of high-quality booksharing skills.

Ready, Set, Share A Book! is a parent-implemented, manualized book-sharing intervention for parents of infants and toddlers 12 to 36 months of age (Salley et al., 2022). Parents receive one-on-one coaching to use high-quality book-sharing skills with their infant or toddler. Notably, recent work has provided strong evidence for the benefit of this relatively simple, low intensity/low cost book-sharing training program for caregivers of very young children (Cooper et al., 2014; Murray et al., 2016; Salley et al., 2022; Vally et al., 2015). Ready, Set, Share A Book! was adapted from the work of Cooper and colleagues with families in South Africa (Cooper et al., 2014; Murray et al., 2016; Vally et al., 2015). Importantly, the book-sharing skills included in Ready, Set, Share A Book! are guided by (1) evidence-based language facilitation strategies for infants and toddlers (e.g., Baxendale & Hesketh, 2003; Girolametto et al., 1996; Kaiser & Roberts, 2013; Kaiser & Trent, 2007) and (2) evidencebased dialogic reading practices with preschoolers (Lonigan & Whitehurst, 1998; Whitehurst et al., 1988, 1994) that have been modified to be developmentally appropriate for infants and toddlers. The specific book-sharing skills targeted within the intervention are defined in Table 1 and include: follow child's lead; using a lively voice; naming (labeling); pointing



Table 1 Ready, Set, Share A Book! Skills

Lesson	Target skill	Description	Book of the week
1	Follow child's lead	Support child interest and active participation. Facilitate child handling of the book (help turn pages, steady, orient book).	Say Goodnight Helen Oxenbury
	Lively voice	Use engaging voice (tone/pitch, sound effects, etc.).	
2	Naming	Name objects and actions in the book.	HELEN OXENBURY
-	Tulling		All Fall Down
	Pointing and naming	Point and naming objects/actions in book. Name objects/actions child points to.	
	Praise/positive comments	Praise child for participating in book sharing.	
3	Repeating	Repeat a word your child says or attempts to say.	Good night, Spot
	Using actions	Act out the actions in the book.	
4	Elaborating	Add descriptive information to a word already labeled.	The Babies "Janahand Doggies "BOOK"
	Linking	Connect the book to the real-world: link to here and now (e.g., "Look at baby's toes, here are your toes") and beyond (e.g. "That dog is like Grandma's dog").	
5	Asking questions/pausing	Ask WH- question and pause for child response. For words child understands, ask child to point to object/action (e.g., "Where is the?"). For words child says, point and ask question (e.g., like "What/Who is that?").	Bedtimel
6	Talking about feelings	Point out and talk about emotion content in the book (e.g., "Gorilla is crying. He is sad."); use your own face/voice to convey emotions.	HUG
7	Rhyming and pausing	Pause during rhyme and wait for child to fill in the blank.	Balay Cal pas have the line when
8	Review and next steps		Parent chooses

Adapted from Salley et al. (2022). See also Resource Reference List

and naming; using praise and positive comments; repeating; using actions; elaborating; linking; asking questions; rhyming and pausing; and talking about feelings. The skills are sequenced to build developmentally across the intervention sessions. Our approach also incorporates specific books each week, selected based on characteristics that support shared

reading, to allow focused opportunities for practicing new skills (Deitcher et al., 2017; Hoffman et al., 2015; Kupetz & Green, 1997).

Ready, Set, Share A Book! is designed to be delivered by a variety of early intervention specialists working with parents in a broad range of settings (e.g., community and



Part C providers; school or center-based staff and related services providers; and other early childhood professionals or paraprofessionals). Our initial evaluation of the feasibility and preliminary benefits of *Ready, Set, Share A Book!* produced promising results. Compared to wait list controls, parents who received the intervention demonstrated significant improvement in their overall use of high-quality dialogic book-sharing skills with their infant from baseline to post-intervention (Salley et al., 2022).

Current Study

The present study aims to examine parent book-sharing skill acquisition and changes in skill use during the course of the Ready, Set, Share A Book! intervention. The intervention is relatively low intensity/dosage, with 45 min of group instruction followed by 1:1 coaching (intensity), occurring weekly (frequency), over an 8-week period (duration). Therefore, an important question is whether this brief approach produces meaningful change in parent book-sharing skills with their infant/toddler. A related question is the extent to which individual parents evidence improvement in book-sharing skills. Ready, Set, Share A Book! includes a series of skills (Table 1) which are related and build in a developmental sequence. However, it may be that some book-sharing skills improve more readily in the context of a brief intervention. Furthermore, because the specific book utilized within shared reading interactions may influence parent skill use, it is important to examine how the use of parents' booksharing skills changed over the course of intervention within the same storybook. Specifically, the current study asked three research questions: (1) Do all parents, including both Intervention and Wait List Controls, demonstrate gains in individual book-sharing skill use after receiving intervention compared to baseline? (2) After weekly instruction, do parents demonstrate immediate response to instruction, evidenced in their mean difference in skill use the week after skill introduction compared to the 2 weeks prior? Also of interest was number of parents increasing by more than 1 SD of the group baseline rate in use of the new skill over their baseline rate. (3) Do parents demonstrate change in book-sharing skill use within the same book, between first and second introduction, during the intervention? It was predicted that after participating in the intervention, parents would demonstrate significant increases in their use of highquality book-sharing skills compared to their baseline skills. It was also predicted gains would be evident at the individual level, with parents demonstrating immediate gains after instruction (i.e., from the 2 sessions before a new skill was instructed, compared to the session 1 week after skill instruction and later sessions). Finally, it was expected that meaningful gains would be evident when comparing parents'

book-sharing skills used during their first and later use of the same book after receiving intervention.

Methods

Participants

Parents and their infant/toddler were recruited through Parents as Teachers (PAT). PAT offers home visits and center-based activities to provide parents with information about early development, learning and health, as well as developmental screenings and referrals for assessments. PAT was chosen as a recruitment source because they serve families with high needs characteristics as well as lower risk families. This initial evaluation of Ready, Set, Share A Book! with lower risk families will serve to guide our next steps of extending the intervention to a broader range of at-risk and language delayed child populations. PAT staff shared study flyers with all eligible families. Children were between 14 and 19 months at enrollment, between 14 and 22 months of age during the intervention, and carried fullterm (> 36 weeks). Children and parents were able to participate in English (i.e., did not utilize a translator for PAT visits) and without visual/hearing impairments that would prevent participation. See Table 2 for demographics.

At enrollment, dyads (n = 30) were randomized to Treatment (n = 15) or Wait List Control Groups (n = 15). The Wait List Control group participated in study assessments, but did not receive weekly group sessions during the trial phase. We have reported elsewhere on gains in book-sharing skills for the Intervention group compared to Wait List Controls (Salley et al., 2022). Parents in the Wait List Control group were invited to participate in the intervention after the control phase. Here we include the full sample of parents who completed the intervention from both Treatment and Wait List Control groups, in order to examine the skills which benefited from instruction for the larger sample of parents. Completion was defined as parent-infant dyads who missed no more than 2 sessions of the intervention (n = 20). For additional participant and study details and between group difference tests, see Salley et al. (2022). Written informed consent was obtained from parents prior to initiation of study activities. The study was approved by the Human Subjects Committee at the University of Kansas Medical Center (HSC #3704). Study data were collected and managed using REDCap electronic data capture tools hosted at the University of Kansas Medical Center (Harris et al., 2009).

Ready, Set, Share A Book! Intervention

Ready, Set, Share A Book! included education and coaching for parents on dialogic book-sharing over 8 sessions



Table 2 Demographic characteristics of the sample (N=20)

Child age at enrollment (months)	16.0 (1. 3)
Range	14–19
Child Sex ratio (M:F)	13:7
Child Race/Ethnicity	
Caucasian	18
African American	2
American Indian/Alaskan Native	0
Multiple	0
Hispanic/Latino—Caucasian	2
Maternal Age (years)	32.0 (4.5)
Maternal Education	
High School/Some College	5%
College	65%
Graduate School	30%
Maternal Race/Ethnicity	
Caucasian	18
African American	2
American Indian/Alaskan Native	0
Multiple	0
Hispanic/Latino—Caucasian	2
Home language	
English only	65%
Second language (> 10% but less than 50%)	20%

A total of n=30 families were enrolled in the study and randomized to Intervention (n=15) or Wait List Control (n=15). Demographics are reported here for all families who completed the *Ready*, *Set*, *Share A Book!* intervention (n=20 total; n=14 Intervention Group; n=6 Wait List Control Group)

(45 min each) delivered weekly. This dosage and intensity are in line with book-sharing interventions for toddlers (Heidlage et al., 2020). Intervention was delivered in small groups (4-5 dyads) in a community PAT playroom. Sessions were manualized with soft-scripted lessons for instruction and delivered by research assistant facilitators. Facilitators were trained during a half-day of instruction that included role play and practice; they were supervised by licensed providers (BS, DD) during the intervention. Following the "Teach-Model-Coach-Review" approach (Roberts et al., 2014), the intervention included: (a) teaching pre-requisite skills; (b) regular instruction; (c) introducing relevant, meaningful educational content; (d) providing modeling and practice; and (d) supporting reflection, problem-solving and goal setting (Dunst et al., 2007; Ellis et al., 1991; Trivette et al., 2009). Facilitators led the same small groups each week; however, families occasionally attended different groups due to illness or family scheduling conflicts. Facilitators aimed to provide 1:1 coaching consistently to the same parents each week, although occasionally coaching dyads varied. Parents took home the book of the week as well as a weekly guide card with tips/reminders for using book-sharing skills. Parents were asked to practice book-sharing daily between sessions.

Each session included both *group instruction* (25–30 min) and individual coaching (5–10 min). Group instruction consisted of a brief check-in, followed by introduction of a new book-sharing skill, including instruction on how to use the skill, why the skill is beneficial, and modeling how to use the skill. Next the corresponding book of the week was introduced, along with video examples of parent-child dyads using the skill (see Table 1), and then individual coaching 1:1 with each parent-child dyad and a facilitator. During coaching, the facilitator used specific strategies to support parents' skill learning and mastery: reinforcement (praise) of parents' book-sharing skill use; modeling book-sharing skills for parents; and instructing parents to use a booksharing skill. In each session, facilitators coached at least five specific opportunities for parents to use the new skill and at least five opportunities for parents to use skills from any of the previous weeks. A supervisor reviewed recordings of individual coaching sessions and provided facilitators with weekly, written feedback on their coaching that identified appropriate use of specific coaching strategies to support fidelity of implementation. To examine facilitator fidelity of implementation, 33% of coaching sessions across all facilitators were randomly selected and coded offline by trained observers; facilitator fidelity was 88.4% for successfully coaching new skills on at least 5 opportunities and 85.7% for successfully coaching previous skills on at least 5 opportunities. For additional intervention details, see Salley et al., 2022.

Study Measures

Parent Book-Sharing Skills

Baseline assessments of parent book-sharing skills were collected in the lab environment. Parents were asked to look at a book (Clap Hands by Helen Oxenbury) with their child for 5 min, just as they would if they were at home. During the intervention sessions, parents were asked to practice book sharing with their child using the book of the week during 1:1 coaching. All book-sharing interactions were video-recorded and coded offline by trained observers for frequency of parent use of book-sharing skills (see Table 1). Observers used Noldus Observer to code the time each booksharing skill occurred. Inter-rater reliability assessed on 33% of the sample yielded a Kappa of .63. A third of sessions were randomly selected to be coded by two observers to assess and maintain inter-rater reliability. To examine parent skill acquisition, parent rates per minute of using each book-sharing skill demonstrated at baseline during the lab assessment were compared to rate of skill use at completion



of the intervention (Week 6). Week 6 was chosen to reflect maximal skill use, because Week 7 incorporated a rhyming book which restricted parent use of other book-sharing skills and because the Wait List Control group did not receive Week 8 of instruction, which was a review of skills session, due to scheduling conflicts at the PAT location.

Data Analysis

In order to determine if parents demonstrated change in skill use from baseline to Week 6, paired samples t-tests were used. To examine the change in individual parent skill use throughout the course of the intervention, we first calculated the standard deviation for the use of each skill at baseline. We then determined how many parents improved in their skill use by more than 1 standard deviation in the week following the skill introduction, or in any subsequent weeks, as compared to the average of the two weeks prior to skill introduction. In order to determine if parents demonstrated increased skill-use within the same book, rate of parent skill use at Week 8 was compared to the first time the same book was used; the comparison week varied by parents' book of choice. Only the Treatment group participated in a Week 8 session; therefore, the Wait List Control group was not included in this last analysis. Paired samples t-tests were again used.

Results

Gains in Individual Book-Sharing Skills

Fourteen parents were assessed on skill use during the two weeks prior to the skill being taught and again at Week 6. Of the 12 skills assessed, 4 changed significantly

with intervention. See Table 3 for mean rate and standard deviation prior to teaching and Week 6, t-test results, and effect sizes. Lively Voice and Talking About Feelings each increased significantly with large effects. Following Child's Lead (i.e., decreases in occurrences of not following child lead) had a moderate improvement that was statistically significant. Using Actions decreased significantly with a large effect. Pointing/Naming and Repeating had moderate increases that were not statistically significant. Figure 1 shows the distribution of average skill rate during the two weeks before the skill was instructed compared to end of intervention (Week 6).

Immediate Response to Book-Sharing Skill Instruction

When comparing average rate of skill use two weeks prior to skill instruction to average rate of skill use the week after skill instruction, parents demonstrated a significant immediate change in use of Following Child's Lead, Repeating, Elaborating, and Linking with medium to large effect sizes, as can be seen in Table 4. Average rate of Asking Questions decreased significantly immediately after instruction. Use of lively voice decreased a moderate, but not statistically significant amount. Furthermore, if we examine improvement in parents' use across all skills taught, 20% or more of the parents showed immediate improvement by more than 1 SD of the baseline rate for seven of the twelve skills. Additionally, most skills showed an improvement by 1 baseline SD, at any subsequent week after skill instruction, for 30% or more of the parents. Ninety percent of the parents increased their rate of the skill Elaborating by 1 SD or more, and 80% increased their Linking skill by 1 SD or more in a subsequent week after instruction.

Table 3 Changes in rate from baseline to week 6 (N = 14)

	Rate baseline	Rate week 6	t-test	Effect size
Follow child's lead ^a	.39 (.52)	.08 (.11)	t(13) = 2.15, p = .05	d=.58
Lively voice	1.67 (1.50)	2.71 (1.09)	t(13) = 2.67, p = .02	d = .71
Naming	.97 (.56)	.91 (.49)	t(13) = .31, p = .76	d = .08
Pointing/naming	1.77 (1.46)	2.70 (1.66)	t(13) = 1.77, p = .10	d = .47
Praise/positive comments	.63 (.76)	.65 (.81)	t(13) = .08, p = .94	d = .02
Repeating	.33 (.36)	.65 (.62)	t(13) = 1.68, p = .12	d = .46
Using actions	1.54 (1.29)	.75 (.46)	t(13) = 2.69, p = .02	d = .72
Elaborating	1.42 (1.17)	1.58 (1.37)	t(13) = .64, p = .53	d = .17
Linking	.55 (.62)	.73 (.56)	t(13) = .80, p = .44	d = .21
Asking questions	1.80 (1.30)	1.67 (1.12)	t(13) = .26, p = .80	d = .07
Rhyming/pausing	.01 (,05)	.07 (.25)	t(13) = 1.00, p = .34	d = .30
Talk about feelings	0	2.32 (.87)	t(13) = 10.01, p < .001	d = 2.67

^aFollow Child's Lead was coded as occurrences of parent behaviors that limited child freedom with the book and a decrease in the rate reflects improvement in this book-sharing skill



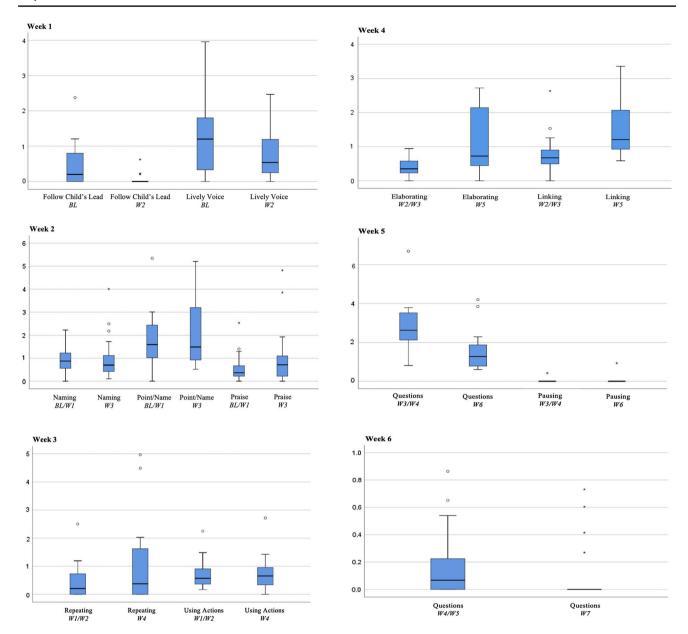


Fig. 1 Change in skill rates by week

Change in Book-Sharing Skills Within the Same Book

Several parents (n=12) had repeated skills assessments on the same book, which was observed on two occasions: during the Week 8 review of skills session when parents were asked to choose one of the books used previously during the intervention; and during another weekly session when the same book was used for specific skill instruction. However, parents in the Wait List Control group did not have a Week 8 review of skills session due to scheduling constraints at the intervention site, and as a result, did not have the opportunity for the repeated skills assessment. Four of the 12 skills assessed demonstrated

significant (p < .05) changes in parents' use from the first time the book was introduced compared to Week 8 when the book was shared again. Table 5 presents the average rates, t-test result, and effect size for each skill. The skills that changed significantly during book sharing within the same book included Lively Voice, Naming, Using Actions, and Talking About Feelings, all with large effects.



Table 4 Immediate response to instruction paired-samples t-tests and immediate response to instruction by person (N=20)

	Prior me	an (SD)	Wee (SD)	k after mean	t-test	Effect size	+1 SD gain week after	+1 SD gain any week after
Follow child's lead ^a	BL	.46(.64)	W2	.06 (.15)	t(18) = 2.84, p = .01	d = .64	4/19–21%	6/20-30%
Lively voice	BL	1.28 (1.15)	W2	.82 (.74)	t(18) = 2.05, p = .06	d = .48	1/19–5%	13/20-65%
Naming	BL/W1	.89 (.54)	W3	1.00 (.95)	t(19) = .51, p = .62	d = .11	6/19-32%	14/20-70%
Pointing/naming	BL/W1	1.76 (1.22)	W3	2.06 (1.42)	t(19) = 1.02, p = .32	d = .23	7/20-35%	14/20-70%
Praise/positive comments	BL/W1	.56 (.59)	W3	.99 (1.27)	t(19) = 1.73, p = .10	d = .39	8/20-40%	14/20-70%
Repeating	W1/W2	.43 (.66)	W4	1.08 (1.53)	t(16) = 2.56, p = .02	d = .62	5/17-29%	14/20-70%
Actions	W1/W2	.74 (.56)	W4	.80 (.64)	t(16) = .36, p = .72	d = .09	3/17-18%	14/20-70%
Elaborating	W2/W3	.41 (.29)	W5	1.12 (.92)	t(16) = 4.10, p = .001	d = .99	12/17-71%	18/20-90%
Linking	W2/W3	.80 (.60)	W5	1.56 (.86)	t(16) = 5.22, p < .001	d = 1.27	9/17-53%	16/20-80%
Asking questions	W3/W4	2.81 (1.47)	W6	1.61(1.10)	t(14) = 4.18, p = .001	d = 1.08	0/15—0%	2/20-10%
Pausing	W3/W4	.03 (.11)	W6	.06 (.24)	t(14) = 1.00, p = .33	d = .23	1/15–7%	4/20-20%
Talk about feelings	W4/W5	.17 (.24)	W7	.10 (.22)	t(19) = .96, p = .35	d = .22	3/20-15%	9/20-45%

^aFollow Child's Lead was coded as occurrences of parent behaviors that limited child freedom with the book and a decrease in the rate reflects improvement in this book-sharing skill

Table 5 Summary of change in skills from within the same book (N=12)

Parent skill (rate)	Week	Mean	SD	t-test, effect size
Follow child's lead ^a	FT	.07	.24	t(11) = .51, p = .62, d = .16
	W8	.03	.07	
Lively voice	FT	1.05	.75	t(11) = 2.77, p = .02, d = .79
	W8	2.11	1.09	
Naming	FT	.69	.49	t(11) = 4.33, p = .001, d = 1.25
	W8	1.65	1.04	
Praise/positive comments	FT	1.02	1.62	t(11) = .12, p = .91, d = .03
	W8	.97	.44	
Point/naming	FT	1.43	1.14	t(11) = .41, p = .69, d = .12
	W8	1.54	.92	
Repeat	FT	.59	1.40	t(11) = 1.23, p = .25, d = .36
	W8	.90	.95	
Actions	FT	.91	.86	t(11) = 3.25, p = .01, d = .93
	W8	1.59	1.12	
Elaboration	FT	.40	.35	t(11) = 1.77, p = .11, d = .53
	W8	.55	.43	
Linking	FT	1.08	.52	t(11) = 1.98, p = .07, d = .57
	W8	1.53	.97	
Asking questions	FT	2.21	1.54	t(11) = 1.41, p = .19, d = .40
	W8	2.65	1.48	
Pausing	FT	.00	.00	t(11) = 1.00, p = .34, d = .29
	W8	.18	.63	
Talk about feelings	FT	.11	.26	t(11) = 2.41, p = .04, d = .69
	W8	.34	.30	

Skill changes from first time (FT) with book to second time (Week 8) with the same book. Week 8 data were only available for the Intervention group; the Wait List Control group did not have a Week 8/review session



^aFollow Child's Lead decrease in rate reflects an improvement in skill

Discussion

The aim of the current study was to examine parent booksharing skill gains after participating in a systematic intervention. We applied a targeted, developmentallysequenced, manualized approach to coach parent use of high-quality book-sharing skills with children under 3 years of age. Gains in high-quality book-sharing skills were assessed through multiple comparisons in this study. This was done to assess the immediate and long-term parent gains as a result of this intervention. Ready, Set, Share A Book! teaches parents a large number of skills in a short time frame. Therefore, parents often fluctuate in the types of skills they use in any given session depending on the skill(s) of the week and the book used. The multiple analyses used capture the profile of change in parents' skill use across the intervention period. The current results indicate improvement in parent skills over baseline in key booksharing domains after completing the intervention, as well as evidence for immediate response to instruction, and evidence of increased skill use within the same book (i.e., controlling for book characteristics). These results provide additional evidence for efficacy of the Ready, Set, Share A Book! manualized approach and extend previous evidence for the benefits of shared reading intervention for parents of infants and toddlers (Vally et al., 2015).

Parent Book-Sharing Skill Gains

Parents who participated in Ready, Set, Share A Book! demonstrated strong gains in their use of high-quality book-sharing skills. Significant improvements with large to moderate effects were observed for the specific skills of using a Lively Voice, Talking About Feelings and Following Child's Lead; moderate increases were observed for Pointing/Naming and Repeating, although gains were not significant. Importantly, parents' increased use of these skills not only enhances the quality of book sharing by providing focused language stimulation and consistent opportunities for child responding (Girolametto et al., 1996), but also supports increased child engagement with shared reading experiences. We have previously reported that in comparison to controls, who did not demonstrate improvement in book-sharing skills over the four month study period, parents who participated in the intervention demonstrated significant gains in their overall rate of using high-quality book-sharing skills (Salley et al., 2022). The current results further demonstrate the importance of specific instruction to boost parents' use of book-sharing skills with very young children. Of note, the skills that did not evidence gains at intervention end were Praise/Positive Comments, Linking, Elaborating and Asking Questions/ Pausing; and unexpectedly, Using Actions significantly decreased. It is possible that these skills may require additional parent instruction/coaching, and modification to the intervention may be needed to produce more consistent gains. In particular, including additional video examples and more focused modeling (Huebner and Meltzoff, 2005), as well as potentially adjusting the coaching criterion threshold (Ellis et al., 1991), may be beneficial to optimize parents' skill acquisition and improve the intervention for a broader range of family needs.

When we examined the immediate effects of instruction and practice, significant gains with medium to large effects were observed for Following Child's Lead, Repeating, Elaborating, and Linking the week after the new skill was introduced. Unexpectedly, using a Lively Voice and Asking Questions decreased during the week after instruction. It is possible that parents may have been more focused on practicing the new skills instructed (during Week 2 and 6) which may have limited their ability to demonstrate Lively Voice and Asking Questions. Importantly however, most skills were observed to have an improvement of 1 SD or more during at least 1 subsequent week after instruction. Elaborating and Linking in particular were skills that had clear, meaningful gains for the majority of parents (80–90%).

Given these profiles of change in parents' skill use throughout the intervention period, it is necessary to consider implications for coaching. While the manualized, systematic approach is important for ensuring that all families receive the same foundational skill instruction and modeling of skills, it is important for 1:1 coaching to be individualized to a family's specific needs. By identifying a specific coaching target of eliciting at least five parent demonstrations of a book-sharing skill, our goal was to ensure sufficient practice opportunities across all parents. However, for more complex skills, and/or skills that may be more individually challenging for parents, it may be necessary to have a more stringent skill criterion or to extend a lesson until a parent is ready to move forward. An additional modification would be adjusting the intervention model to reduce group instruction time and extend individual coaching time, in order to allow parents to voice questions or concerns and have increased practice opportunity with the support of the facilitator. Of note however, even small gains in parent skills may have potential for enhancing child engagement and for downstream positive benefits. It will be important for future studies to directly examine how to optimize intervention strategies to support parent mastery of book-sharing skills.

To better understand how parents' book-sharing skills changed over the course of intervention, we examined skills used within the same storybook for participants who had a coaching session with the same book twice. This allowed us to remove the variability that different books introduce

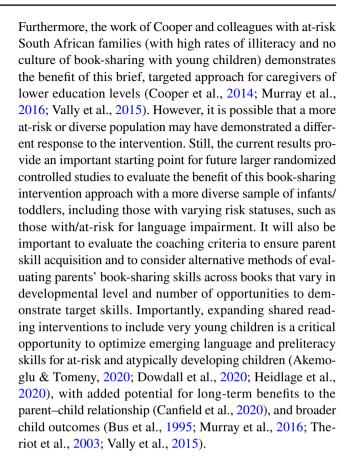


in parent–child book sharing. Significant skill gains with large effects within the same book were observed for Lively Voice, Naming, Using Actions, and Talking About Feelings. This comparison allows for the detection of gains in skills that were undetected in other comparisons. Specifically, Using Actions was observed to decrease in other comparisons, but increased when parents used the same book. This may indicate that certain books provide more opportunities for demonstrating specific skills, such as Using Actions, and that parents may have made gains that were not demonstrated in other books, rather than losing the skill over the course of the intervention.

The influence of the book type itself is an important consideration for our overall intervention approach which utilizes the same book for a week to promote skill acquisition. Book type has also been shown to influence book sharing at an individual level (Deitcher et al., 2017; Hoffman et al., 2015; Kupetz & Green, 1997). While there certainly appear to be broad similarities in the types of books parents choose for their infant/toddler, there are also considerable individual differences in how parents approach the book selection process (Daniels et al., 2021). In the current intervention, the book of the week was selected based on the potential to facilitate use of the new target skill and on the potential to allow demonstration of most other target skills. Nonetheless, some parents in the intervention were observed to have individual challenges specific to the book. For example, parents were noted to have difficulty using more advanced booksharing skills in 'simplistic/easy' books and also observed to default to "reading" the rhyming book rather than using it as a starting point for a conversation about what was happening in the book. Based on results of the current study, it may be necessary to expand the coaching criterion used for demonstrating previous skills each week and to target skill generalization more directly across a range of books. In addition, it may be useful to include additional education and discussion within Ready, Set, Share A Book! intervention sessions, to support parents in understanding how to choose books that are developmentally appropriate and useful for practicing the skills that they are learning.

Limitations and Future Directions

This is one of the first studies to directly examine the benefits of a brief, manualized book-sharing intervention for parents of infants and toddlers. However, some limitations should be considered, including the small sample size and limited diversity of the sample. We have previously demonstrated that positive intervention effects of *Ready*, *Set*, *Share A Book!* were observed for families of different characteristics, specifically maternal age and education, as well as child age and development, suggesting the potential of this approach for more diverse families (Salley et al., 2022).



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Declarations

Conflict of interest The authors have no other disclosures or potential conflicts of interest to report. We wish to extend a special thanks to the families who participated in this study.

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