

The Impact of Shared Book Reading on the Speech and Language Development of Infants and Toddlers Aged 0-36 Months: A Scoping Review

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ABSTRACT

Background: Shared book reading is a common activity between caregivers and their children that facilitates early speech and language development by exposing young children to rich linguistic input. While its benefits are well-documented in children over age three, limited research has explored its impact during the critical early years of 0–36 months. This scoping review aims to gather existing evidence on the effect of storybook, or shared book reading, on the speech-language development of infants and toddlers, identify effective reading strategies, and highlight gaps to inform future early intervention practices. **Methods:** A comprehensive literature search was conducted across 3 databases: ProQuest, Science Direct, and Scopus using the keywords *parental reading*, *storybook reading*, *shared-book reading*, *dialogic reading*, *speech*, *language*, *infant*, and *toddler*. Studies that were published from 2014 until 2024 were screened according to predefined inclusion and exclusion criteria, focusing on caregiver-child reading interactions in typically developing children aged 0–36 months with reported speech and language outcomes. The selection and analysis process were guided by the PRISMA-ScR framework. **Results:** This review analysed 10 studies investigating the impact of shared book reading on children aged 0–36 months. Daily reading at 6 months was linked to better expressive and receptive vocabulary at 12 months, while child engagement was a stronger predictor of expressive language than frequency alone. Print books outperformed electronic formats in promoting verbal output. Semantically-rich illustrations enhanced expressive language, while isolated images supported receptive learning. Dialogic techniques, such as questioning, labelling, and expansion, were associated with improved language outcomes across preverbal, receptive, and expressive domains as well as vocabulary development. **Conclusion:** The findings suggest that shared book reading is an effective tool that supports early speech and language development in children aged 0–36 months. The evidence supports that early and interactive reading experiences contribute meaningfully to preverbal, receptive, and expressive language.

Keywords:

parental reading; storybook reading; shared-book reading; dialogic reading; speech; language; infant; toddler

INTRODUCTION

Speech and language development in the first three years of life represents a critical period marked by rapid brain plasticity and neural growth (ShIPLEY & McAfee, 2021). During this time, dynamic interactions between the child and their environment shape the formation and strengthening of neural pathways essential for language acquisition (Sengpiel, 2007). Repeated exposure to rich language experiences strengthens neural connections involved in language processing. Conversely, insufficient stimulation may lead to the gradual weakening and elimination of underused neural pathways, a process known as synaptic “pruning,” which can adversely affect language development (Deguire et al., 2022; Tierney & Nelson, 2009; Hensch & Bilimoria, 2012; Houston et al., 2014). Thus, early sensory experiences, such as shared

book reading, are vital for establishing the foundational skills necessary for effective communication.

Although various adults can engage in storybook reading, this review focuses specifically on caregiver-child interactions, as caregivers occupy a central role in the child’s immediate social environment, or microsystem, as described by Bronfenbrenner’s bioecological model (Bronfenbrenner, 1977, 1994). The microsystem involves direct, reciprocal interactions, known as proximal processes, that profoundly impact development (Bronfenbrenner & Morris, 2006). As primary communication partners, caregivers scaffold their child’s learning, supporting language development through sustained, meaningful engagement (Shelton, 2018). Hence, the quality of caregiver-child interaction during storybook reading is a critical determinant of early language growth (Bus et al., 1995). Shared storybook

reading is defined as an activity between parent and child where the parent reads the storybook aloud to the child and engages the child in joint attention to the book's content (Vogler-Elias, 2013). Storybook reading introduces children to a wider and more diverse vocabulary than typical everyday conversations, which often revolve around immediate and concrete contexts (Salley et al., 2002; Logan et al., 2019). Through storybooks, children are exposed to decontextualized language, words, and concepts beyond their daily experiences, promoting richer linguistic input (Grolig, 2022). Studies also show that parents use more language input during shared book reading than during other play activities, significantly contributing to children's vocabulary growth (Clemens & Kegel, 2020; Richards et al., 2017).

Dialogic reading, a method in which parents actively engage children by encouraging verbal and nonverbal participation during reading, is particularly effective in fostering language development (Whitehurst et al., 1988). This approach is based on three core principles: encouraging child participation, providing contingent feedback, and tailoring the reading to the child's language level. Research demonstrates that dialogic reading yields stronger improvements in both receptive and expressive language skills compared to traditional passive reading (Salley et al., 2022; Chang et al., 2022). Randomized controlled trials further confirm its benefits in increasing children's enjoyment, attention, and engagement with storybooks (Murray et al., 2016; Salley et al., 2022). This scoping review seeks to synthesize current evidence on the effects of storybook reading on speech and language development in infants and toddlers aged 0–36 months. It highlights the importance of early language stimulation, especially within the context of parent-child interactions and dialogic reading strategies. The review aims to identify gaps in the literature related to storybook types, reading strategies, and frequency to better understand how these factors influence early language acquisition. Ultimately, the findings intend to provide caregivers, educators, and speech-language pathologists with evidence-based guidance for incorporating shared-book reading into early intervention to support optimal language development.

METHODOLOGY

Research Questions

This scoping review is guided by the following key questions:

1. What is the impact of storybook reading on the speech and language development of infants and toddlers aged 0 to 36 months?

2. What are the reported speech and language development outcomes for infants and toddlers involved in storybook reading, according to existing studies?
3. Which types of storybooks are most effective in supporting speech and language development in children aged 0 to 36 months?
4. What reading strategies and techniques are effective in promoting speech and language development in infants and toddlers within this age range?
5. How frequent should shared-book reading be implemented to be most effective in promoting speech and language development in children aged 0 to 36 months?
6. What gaps and inconsistencies exist in the current research on storybook reading and early language development?

Eligibility Criteria

Criteria of Study Participants

We included studies involving typically developing children aged 0 to 36 months. Studies involving children with developmental language delay/disorder, autism spectrum disorder, attention-deficit hyperactivity disorder, global developmental delay, or other medical diagnoses that could impede typical speech and language development were excluded. Studies that involved shared book reading activity facilitated by professional service providers such as therapists, teachers, or day care providers as the reading partners were also excluded, as the review focused on naturalistic caregiver-child interactions. Caregivers were defined as parents or other family caregivers directly involved in the child's daily interactions.

Criteria of Study Characteristics

This review included studies published in English or Malay that focused on storybook reading interventions and reported outcomes related to speech and language development. Studies were eligible if they involved comparisons between an intervention group and a control group, or if they included repeated measures such as pre- and post-intervention assessments. A wide range of study designs were accepted, including randomised controlled trials, non-randomised controlled trials, observational studies, cohort studies, case studies, and qualitative and quantitative research. However, review articles were excluded from this scoping review.

Selection of Sources of Evidence

The selection process involved three reviewers. Reviewer

1, a final-year Speech-Language Pathology student at the International Islamic University Malaysia (IIUM), conducted the primary screening. Reviewer 2, a qualified speech-language pathologist and lecturer with a PhD in Health Sciences (Speech-Language Pathology) from IIUM, provided validation and approval for the articles that passed initial screening, including the final selection of included studies. Reviewer 3, a children's book publishing consultant and founder of Swaterbit Kids Book, served as an external advisor in the selection process in the case of disagreements between Reviewer 1 and Reviewer 2.

Data Searching

A systematic search was conducted across three databases: ProQuest (28 results), ScienceDirect (12 results), and Scopus (122 results), yielding a total of 162 articles. After removing duplicates, 154 articles remained. All articles were identified using the keywords: 'parental reading,' 'storybook reading,' 'shared-book reading,' 'dialogic reading,' 'speech,' 'language,' 'infant,' and 'toddler.' Only articles published between 2014 and 2024 were considered. The data search began in March 2025 and was completed in May 2025.

Data Selection

During the initial screening of titles and abstracts, 135 articles were excluded for not meeting the inclusion criteria. The remaining 26 full-text articles were retrieved for further eligibility assessment. Of these, 16 were excluded for the following reasons: 2 were ongoing studies with no available results, 3 included children older than 36 months, 7 did not report on child communication outcomes, 1 was a review article, and 3 full-text articles were not accessible within the project timeframe (Figure 1).

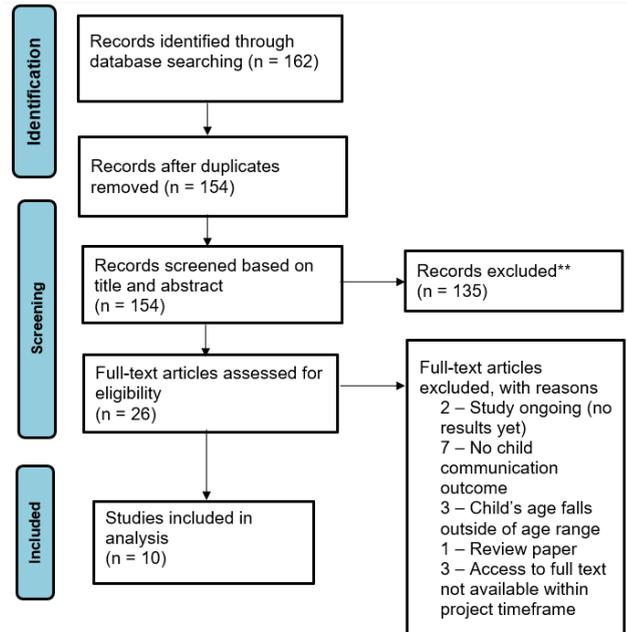


Figure 1: PRISMA flow diagram

Data Extraction/Charting Process

Data from the 10 included studies were extracted to capture key information. A thematic analysis was conducted to examine and classify the types of books used, the characteristics of the reading activities (i.e., number of books, frequency, duration, reading strategies applied), assessment methods and tools used, and any speech-language outcomes reported. To support consistency in analysis, operational definitions used for categorizing the characteristics of the storybooks are detailed in Table 1.

Data Analysis

A descriptive summary table (Table 2) was developed to present the key details of the selected studies involving shared storybook reading activities between caregivers and children, and their reported effects of storybook reading on the children's speech and language development. Table 3 summarizes key study procedures, including assessment methods and tools, intervention dosage (i.e., number of books, session frequency, and session duration), and book characteristics. Table 4 outlines the effects of shared book reading on specific language domains, as reflected in the communication

outcomes reported across studies (i.e., preverbal skills, receptive language, expressive language, vocabulary, and general communication). Table 5 details the reading strategies implemented in each study, with their definitions.

The effects were categorized as: positive findings (+), indicating improvement in communication outcomes; or ND (no difference) when no statistically significant changes

Table 1: Summary of book characteristics and their definitions

1.1 Format of the book	Definitions
Basic printed picture book	Standard picture books with no interactive and manipulative features such as pop-ups, flaps, textures, and sound buttons (e.g., <i>Just a Mess</i> by Mercer Mayer)
Interactive picture books	Picture books with interactive and manipulative features such as pop-ups, flaps, textures, and sound buttons (e.g., <i>Bambu Saklambaç Oynuyor</i>)
Enhanced e-book	The book includes Audiovisual Hotspots—tapping an illustration reveals and narrates the word (e.g., “seagull”). It also features sound effects for images and page turns, like a dog panting or ocean waves. Holding a sentence triggers optional sentence narration.
Basic e-book	The book features pages that can be turned by swiping, and tapping the illustrations will display the corresponding word. However, there are no sound effects and no auto-narration.
1.2 Illustrations in the book	Definitions
Semantically rich	Illustrations that depict objects within meaningful and familiar settings (e.g., popcorn shown in a bucket at a movie theater)
Images in isolation	Images showing objects alone, without contextual background (e.g., the same popcorn pieces displayed on a plain white background)

Table 2: Descriptive summary of included studies

ID	Study	Language (country of origin)	Study design	Child participants				Age (at the time of data collection) in months	Facilitator of shared book reading activity	Child's communication outcomes measured	Effect on language development
				Sample size			Gender		Caregiver		
				Total sample size	Intervention group	Control group					
S1	Marjanovič -Umek et al., 2016	Slovenian (Slovenia)	Longi- tudinal study	51	51	0	28M 23F	16, 31	Mother, Father	<ul style="list-style-type: none"> ● Vocabulary size ● Mean length of utterance ● Sentence complexity (SC) 	+
S2	Dicataldo & Roch, 2022	Italian (Italy)	Cross- sectional correlational study	44	44	0	28M 16F	20 - 36	Mother	<ul style="list-style-type: none"> › Receptive vocabulary › Expressive vocabulary › Mean length of utterance › Syntax comprehension › Syntax production › Syntax complexity 	+
S3	Bergström, 2024	Swedish (Sweden)	Feasibility study	11	11	0	6M 5F	8 - 9	Mother, Father	<ul style="list-style-type: none"> › Symbolic communication › Receptive vocabulary › Expressive vocabulary 	+
S4	Madhavan & Mani,	German (Germany)	Quasi- experiment-	81	81	0	39F 42F	24 - 30	Mother, Father	<ul style="list-style-type: none"> › Vocabulary size › Preverbal 	+

	2024		al, observatio- nal and correlational study							communication: - Attention to the book - Interactiveness; frequency of shared gestures, gaze checking, and pointing › Receptive vocabulary: - Word-object mapping recognition	
S5	Ho et al., 2023	English (Australia)	Cross-secti- onal study	48	48	0	23M 26F	6, 9, and 12	Mother	› Verbal behaviours: - vocalisations › Non-verbal behaviours: - Pointing, page-turning	+
S6	Weber & Colunga, 2022	English (USA)	Longitudinal randomised control study	21	21	0	NS	19 - 23	Mother, Father	› Receptive vocabulary › Expressive vocabulary	+
S7	Dowdall et al., 2021	IsiXhosa (South Africa)	Randomised controlled trial	140	70	70	75M 65F	21 - 28	Mother, Father	› Attention › Receptive language › Expressive language › Mean length of utterance	+
S8	Munzer et al., 2018	English (USA)	Experiment- al, laboratory- based study	37	37	0	20M 17F	24 - 36	Mother, Father	› Vocabulary size › Expressive language: - Total number of verbalisations during shared-book reading	+
S9	O'Farrelly et al, 2017	English (Ireland)	Longitudinal experiment- al and quasi-	236	158	78	NS	6, 12	Mother	› Receptive vocabulary: - Total words understood	+

		experiment- al study								Expressive vocabulary: - Total words produced	
S10	Ünlütak, 2022	Turkish (Turkey)	Longitudinal study	30	30	0	12M 18F	16 - 21	Mother, Father	<ul style="list-style-type: none"> › Preverbal communication: <ul style="list-style-type: none"> - spontaneous gesture (pointing to a picture without parent's questions) › Receptive language: <ul style="list-style-type: none"> - elicited gesture (pointing to pictures in response to parent's questions) › Expressive language: <ul style="list-style-type: none"> - elicited speech (verbally responding to parent's questions) - elicited speech and gestures - spontaneous speech (speech initiations without parent's questions) - spontaneous gestures and speech (gestures and speech without parent's questions) 	+

(+) indicates positive findings

(NS) indicates not specified

Table 3: Summary of study procedures

ID	Assessments conducted		Dosage of intervention			Book characteristics
	Methods	Tools	No. of books	Duration	Frequency	
S1	<ul style="list-style-type: none"> ▸ 6 assessments conducted over 15 months ▸ Vocabulary carried out as a follow-up during five-month intervals at the ages of 1;4, 1;7, 1;10, 2;1, 2;4, and 2;7 years 	<ul style="list-style-type: none"> ▸ Slovene adaptation of the MacArthur-Bates Communicative Development Inventories (CDI; Fenson et al.) ▸ To assess MLU: Report from parent on the three longest utterances produced by the child 	NS	NS	An average of five or six times a week	NS
S2	<ul style="list-style-type: none"> ▸ Children were assessed individually in a quiet room during school hours, with an educator present. 	<ul style="list-style-type: none"> ▸ Test del Primo Linguaggio (TPL) - standardized language test for Italian children aged 12 and 36 months. ▸ Italian version of the MacArthur-Bates Communicative Development Inventory (MB-CDI) ▸ To assess MLU: Report from parent on the three longest utterances produced by the child ▸ To assess the child's interest and engagement in reading, Principal Component Analysis (PCA) was used on three parent-reported items: Child interrupts during reading, Child invents stories during reading, Child engages in dialogue during reading 	NS	NS	average at least once a day	NS

S3	<ul style="list-style-type: none"> › Assessed pre- and post-intervention › First assessment conducted at 8 months, and a second assessment conducted at 18 months old 	<ul style="list-style-type: none"> › Swedish version of the BAYLEY-III instrument used for assessing infant cognition, language, and motor development › The communication and symbolic behavior scales development profile infant-toddler checklist (CSBS DP ITC) 	NS	NS	NS	NS
S4	<ul style="list-style-type: none"> › Child's categorical interest was assessed, for each category, researchers selected: › 5 familiar objects (known to be recognizable by children of the tested age) and 1 unfamiliar (novel) object to test recognition and learning › Parental report and proportion of looking at objects (30 objects) were obtained to determine the child's interest. › To assess the child's enthusiasm and interactivity, video recordings of shared book-reading sessions were used. Two blind coders (new research assistants) rated the interaction quality 	<ul style="list-style-type: none"> › Vocabulary size › German CHILDES › Wordbank database › MacArthur-Bates Communicative Development Inventory (MBCDI) 	6	1.3–9.96 min	NS	<ul style="list-style-type: none"> › <u>Format:</u> - E-books › <u>Content Details:</u> - Images in isolation: Each object is shown against a grey background - Texts had similar length across all pages (27–31 words; mean = 28.58)

S5	<ul style="list-style-type: none"> › Assessment was conducted when the infants were 6, 9, or 12 months of age. › Caregivers were asked a series of questions adapted from previous studies. These included whether they had started reading with their infant, who typically participated in the reading sessions, and how frequently these sessions occurred. › The parent-child dyad participated in a 5-minute reading session in a testing room. A video recording of the interaction was obtained. 	<ul style="list-style-type: none"> › Ages and stages questionnaire (ASQ; Squires & Bricker, 2009 - parent-report questionnaire which assesses the child's developmental progress in five sub-scales: communication, gross motor, fine motor, problem-solving, and personal-social domains (Squires & Bricker, 2009) 	<ul style="list-style-type: none"> › 11–20 books (14.6%) › 21–30 books (20.8%) › 31–40 books (12.5%) › 41–50 books (4.2%) › More than 50 books (47.9%) 	<ul style="list-style-type: none"> › 1–10 min (87.5%) › 11–20 min (10.4%) › More than 30 min (2.1%) 	<ul style="list-style-type: none"> › Almost never (2.1%) › 1–2 times per week (6.2%) › 3–4 times per week (12.5%) › 5–6 times per week (14.6%) › Every day (64.6%) 	<ul style="list-style-type: none"> › <u>Content details:</u> - Contains 28 pages - Has a total of 230 words - Includes themes like animals, vehicles, and simple household items - Uses descriptive and rhyming storyline
S6	<ul style="list-style-type: none"> › Children were randomly allocated to 2 study groups: The First group received books of rich contextual illustration, the second group received books of images in isolation › Assessments were conducted at 3 time points: › Pre-intervention visit (week 1) › post-intervention visit (week 8) › follow-up visit following post-intervention (week 16) 	<ul style="list-style-type: none"> › MacArthur-Bates Communicative Development Inventory (CDI) › List of an additional 100 food and vehicle words 	4	NS	NS	<ul style="list-style-type: none"> › <u>Format of book:</u> - printed picture books › 2 separate books based on intervention condition, each with: Semantically rich illustration › Images in isolation illustration

S7	<ul style="list-style-type: none"> › Assessments were conducted at 3 time points: › Baseline post-intervention (week 8) › Follow-up (6 months post-intervention) 	<ul style="list-style-type: none"> › Early Childhood Vigilance Task (ECVT) › Short form of the MacArthur Communication Development Inventory (CDI; Fenson et al., 2000) › The language subscales of the Bayley Scale of Infant Development (Bayley, 1993) › Video recording of parent-child interaction 	6	10 - 15 min	everyday	NS
S8	<ul style="list-style-type: none"> › Researchers used a verbal coding system based on past studies of dialogic and shared e-book reading. › Analysis was done on video recordings of parent-child interactions, dividing them into 10-second intervals. Each interval was marked with a 1 if a specific verbal behavior occurred or a 0 if it did not. These scores were then totaled for each 5-minute book-reading session. 	<ul style="list-style-type: none"> › MacArthur-Bates Communicative Developmental Inventory (CDI) short form 	3	NS	NS	<ul style="list-style-type: none"> › <u>Format of books:</u> - Enhanced electronic book - Basic electronic books - Basic printed book
S9	<ul style="list-style-type: none"> › Participants are allocated into 3 groups: <p>1. Low-Intensity Group: Received free books as gifts starting at 3 months of age.</p> <p>2. High-Intensity Group: Received</p>	<ul style="list-style-type: none"> › MacArthur Communicative Development Inventories Words and Gestures (CDI; Fenson et al., 2007) 	7	NS	<ul style="list-style-type: none"> › <u>Reading at 6 months (high intensity)</u> - Daily (41%) - A few times per week (31%) - Never/rarely (28%) › <u>Vocabulary Reading at 12</u> 	NS

books at 3 months plus home visits by trained mentors who explained the benefits of early reading, encouraged regular reading routines, boosted parents' confidence, and demonstrated and coached quality reading interactions

3. Comparison Group: Received no intervention

- › Assessment was conducted at 12 months of age to examine the association between shared reading at 6 months to later language skills at 12 months.
- › Interview with mother to obtain data on reading frequency was also conducted at 6 and 12 months of age

months (high intensity)

- Daily (31%)
- A few times per week (32%)
- Never/rarely (15%)

› Reading at 6 months (low intensity)

- Daily (29%)
- A few times per week (45%)
- Never/rarely (46%)

› Reading at 12 months (low intensity)

- Daily (50%)
 - A few times per week (31%)
 - Never/rarely (19%)
-

S10	<ul style="list-style-type: none"> › The parent-toddler pairs were tested at a play center regularly attended. › They were instructed to read in their usual, natural way. › The book reading interactions ranged from 55s to 7 min for this task › Parent-toddler conversations were transcribed word-for-word by two research assistants. Both verbal and gestural input from parents and toddlers were coded. Parent and toddler inputs were coded separately. › Coding categories were based on previous research studies. 	<ul style="list-style-type: none"> › Video and audio recording of parent-child interaction during shared-book reading activity 	NS	NS	NS	<ul style="list-style-type: none"> › <u>Format of book:</u> <ul style="list-style-type: none"> - Interactive picture book with lift-the-flap feature › <u>Content details:</u> <ul style="list-style-type: none"> - Some pages contain sentences for parents to read aloud. - Language level is slightly above the child's understanding.
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(+) indicates positive findings
(NS) indicates not specified

Table 4: Summary of the effects of shared book reading by language domain

ID	Preverbal skills	Receptive language	Expressive language	Vocabulary (Re/Ex)	General communication
S1	NT	NT	+	+	NT
S2	NT	+	+	+ (Re/Ex)	NT
S3	+	+	+	NT	NT
S4	NT	+	NT	NT	NT
S5	NT	NT	NT	NT	+
S6	NT	+	+	NT	NT
S7	+	+	+	NT	NT
S8	NT	NT	+	NT	NT
S9	NT	+	+	+ (Re/Ex)	NT
S10	NT	+	+	NT	NT

(NT) indicates not tested
(+) indicates positive findings
(Re) indicates receptive
(Ex) indicates expressive

Table 5: Summary of effective reading strategies applied in each study

ID	Reading strategies applied	Definitions
S3	Contingent response	Provide immediate and appropriate responses to the child’s communication attempts when the child is attentive and ready to receive them (Topping et al., 2013).
S3, S8	Expansion	Expansion means to frame and add information over and above the child’s response (Whitehurst et al., 1988; Zevenbergen and Whitehurst, 2003). (e.g., Child says, “Here is a wagon,” and parent replies, “a big, red wagon.”)
S5, S7	Connecting	Relate the book’s content to the child’s personal experiences or real-world concepts.
S5, S7, S8, S10	Questions	Ask a variety of questions, such as yes/no questions, labelling questions, and open-ended questions

S7, S9	Follow child's interests/let the child take the lead	Allow the child to guide the flow of interaction by following their interest
S7, S9	Pointing and labelling	Direct the child's attention by pointing at items in the book and labeling the objects or characters.
S9	Repeat words and phrases	Expose the child to the same words and phrases repetitively to support language learning
S3	Gestures	Use non-verbal communication together with verbal communication (e.g., making a sleeping gesture while saying the word 'sleep').
S3	Onomatopoeia	Use sound-imitating words that mimic the actual sounds associated with what they represent (e.g, saying "choo-choo" instead of "train").
S3	Parentese	Use exaggerated intonation, pitch range, and elongation of sounds and vowels (Zauche et al., 2016).
S7	Exploring emotions and understanding characters' thoughts	Introduce simple emotion vocabulary (e.g., happy, angry, scared), and talk about what characters might be thinking, feeling, or planning.
S9	Encourage non-verbal communication attempts	Let the child touch, hold, and play with the books, and acknowledge or praise these attempts.
S10	Questions accompanied by pointing	Prompting the child to name objects shown in the pictures by pointing and questioning (e.g., "What's this?" while indicating with a finger).

RESULTS

This scoping review analysed ten studies that investigated the impact of shared book reading on the speech and language development in children aged 0 to 36 months. The findings are organized into five key themes: (1) assessment methods and tools used; (2) dosage of intervention; (3) book characteristics; (4) observed benefits on speech and language development; and (5) use of effective reading strategies.

Assessment Methods and Tools

All ten studies used standardized or semi-standardized tools to assess children's speech and language development (Table 3). The most commonly used assessment was the MacArthur-Bates Communicative Development Inventories (CDI), or its adapted versions, featured in seven studies (Studies S1, S2, S4, S6, S7, S8, S9). Other tools included the Test del Primo Linguaggio (TPL) (Study S2), the Swedish version of BAYLEY-III (Study S3), the Ages and Stages Questionnaire (ASQ) (Study S5), and the Communication and Symbolic Behavior Scales

Developmental Profile (CSBS DP ITC) (Study S3). Researchers utilized video recordings (Studies S4, S7, S8, S10), parent-reported utterances (Studies S1, S2), observational checklists (Studies S2, S3), and coding systems (Studies S2, S4) to evaluate preverbal communication, child engagement, and the quality of parent-child interactions.

Dosage of Reading Sessions

Intervention dosage varied widely across studies, with some not explicitly stating the duration or frequency of sessions (Table 3). However, among the studies that did, reading frequency ranged from once or twice a week to daily. The most common practice reported was daily shared reading. Session durations ranged from brief interactions of 1–10 minutes to extended readings of over 20 minutes. In studies with longitudinal designs (Studies S1, S6, S9), assessments were conducted at multiple intervals to track developmental progress over time. Book exposure also varied, with one study (Study S5) reporting access to more than 50 books by nearly half of the participants.

Book Characteristics

Book types included printed picture books, electronic books (enhanced and basic), interactive books with lift-the-flap features, and themed books using rhyming storylines (Table 3). Several studies emphasized the importance of visual and thematic content. For instance, Study S6 compared books with semantically rich illustrations against those with isolated images. Other books featured common early childhood themes such as animals and vehicles. Only a few studies explicitly detailed the number of books used, but those that did reported using between 3 to 7 books, or a broader range per parental availability.

Reading Strategies

Of the studies reviewed, six described the implementation of dialogic reading strategies (Table 4), while the remainder did not detail the specific techniques used during the shared book reading interactions. Across these six studies, the most commonly reported strategies included pointing and labelling, various forms of questioning, and following the child's lead. Additional techniques encompassed expansion of child utterances, connecting the book's content to the child's personal experiences, exploring emotions, parentese, gestures, onomatopoeia, and contingent responses.

DISCUSSION

The findings addressed all the key questions by examining the overall impact of storybook reading, outlining the speech-language outcomes reported, identifying effective reading strategies and book types, and highlighting gaps within the existing literature. The evidence reinforces a growing body of research suggesting that early, interactive exposure to storybooks can positively influence multiple domains of language development, even before children begin producing full words or sentences.

What is the impact of storybook reading on the speech and language development of infants and toddlers aged 0 to 36 months?

The evidence reviewed demonstrates that shared book reading has a beneficial impact on both preverbal and verbal aspects of communication. Several studies reported gains in preverbal behaviours such as joint attention, eye

gaze, vocalizations, and gesture use, which are critical precursors to expressive language (Salley et al., 2021). Most notably, improvements were also reported in receptive and expressive language, with vocabulary acquisition highlighted in three studies (S1, S2, and S9) as a key outcome. These findings reinforce that early exposure to books does more than familiarize children with print; it lays a foundational framework for linguistic, cognitive, and social development (Duursma et al., 2008).

What are the reported speech and language development outcomes for infants and toddlers involved in storybook reading, according to existing studies?

The studies reviewed collectively reported improvements across multiple language domains (Table 3). Improvements in various domains of speech and language development were reported across the included studies. Preverbal communication skills were noted to improve in two studies (S3 and S7), while growth in receptive language, including receptive vocabulary, was reported in seven studies (S2, S3, S4, S6, S7, S9, and S10). Expressive language outcomes, such as verbal output and expressive vocabulary, showed improvement in eight studies (S1, S2, S3, S6, S7, S8, S9, and S10). Additionally, three studies (S1, S2, and S9) specifically highlighted gains in vocabulary acquisition. One study (S5) reported an increase in general communication scores, although it did not specify the exact language domain assessed.

What reading strategies and techniques are effective in promoting speech and language development in infants and toddlers within this age range?

Across the studies that described reading strategies, dialogic reading techniques emerged as particularly effective. Strategies such as pointing and labelling, open-ended and WH-questions, expansion, gestures, connecting the book's content to the child's real experiences, contingent responses, and following the child's lead were frequently associated with positive language outcomes. These methods promote active engagement, reciprocal communication, and responsiveness, all of which positively impact language learning (Dong et al., 2024). Other techniques, including parentese and onomatopoeia, were also noted for promoting positive language outcomes. The consistent use of such strategies differentiates more effective shared reading interventions from passive ones (Fernald & Simon, 1984; Tamis-LeMonda et al., 2001).

How frequent should shared-book reading be implemented to be most effective in promoting speech and language development in children aged 0 to 36 months?

The reviewed studies exhibited considerable variation in the frequency and duration of shared book reading interventions. While some did not report precise dosage details, those that did generally recommended daily reading as best practice.

O'Farrelly et al. (2017) found that daily shared reading at 6 months was significantly associated with expressive and receptive vocabulary at 12 months. In contrast, reading only a few times per week was linked to gains in receptive but not expressive vocabulary, highlighting the importance of consistent, daily exposure for comprehensive language development. However, Dicataldo and Roch (2022) found no direct link between reading frequency and measures such as receptive and expressive vocabulary, syntactic comprehension, or syntactic production. Instead, they identified children's interest and engagement during reading, not frequency, as significantly related to expressive vocabulary, which in turn supports syntactic and morphosyntactic development. Frequency itself did not predict engagement, suggesting that the quality of interaction may be more influential than quantity. This is supported by Ortiz, Stowe, and Arnold (2001), who found that children whose parents were taught dialogic reading strategies showed greater engagement during shared reading than those whose parents received no such training. These findings suggest that fostering engagement through interactive techniques may have a greater impact on language outcomes than increasing reading frequency alone.

Similarly, Sočan et al. (2016) reported that shared reading frequency at 2 years and 7 months was positively associated with vocabulary size, sentence complexity, and mean length of utterance (MLU).

While daily reading remains an optimal goal, these findings underscore that its effectiveness depends on various factors, including the quality of interaction, child engagement, and caregiver input, rather than frequency alone. Future research should aim to disentangle these elements to inform reading guidelines for early intervention practices better.

Which types of storybooks are most effective in supporting speech and language development in children aged 0 to 36 months?

The types of books used across the reviewed studies varied in format, content, and interactivity, with several key characteristics emerging as influential to language outcomes. This included illustration quality, themes based on the child's interest, and book format (print versus digital).

Weber & Colunga (2022) compared semantically rich illustrated books (Table 1) to those containing isolated images and found nuanced effects on different domains of language development. Rich illustrations were associated with greater expressive language outcomes, particularly in producing target words, suggesting that visually rich contexts may facilitate children's verbal output. In contrast, books featuring isolated images were more effective for receptive vocabulary learning, as children identify and learn target words better during comprehension assessments. This highlights the importance of aligning book design with specific communicative goals—expressive versus receptive language development.

In terms of format, print books were consistently associated with more favourable outcomes than electronic books. According to Munzer et al. (2018), parents were found to use more dialogic reading strategies, such as asking questions, making storyline comments, and reading aloud more frequently during print book interactions. Conversely, during electronic book sessions (both enhanced and basic versions), these behaviors were significantly reduced (Munzer et al., 2018)

Munzer et al. (2018) also found that children demonstrated higher levels of expressive language, as measured by total verbalizations, and greater engagement during print book reading than digital formats. Books aligned with the child's interests also elicited longer attention spans and increased focus on novel word-object associations, which are critical for vocabulary learning (Madhavan & Mani, 2024). These findings suggest that content relevance and medium of presentation are key factors in optimizing the effectiveness of shared book reading experiences for children in the 0–36-month age range.

Despite these findings, few studies provided detailed specifications regarding the number or diversity of books used.

Overall, the evidence supports using developmentally appropriate, visually engaging print books with themes that align with the child's interests as a cornerstone of effective shared reading interventions. Future studies should aim to more clearly document and compare book

characteristics to refine best practices in early literacy and language development.

What gaps and inconsistencies exist in the current research on storybook reading and early language development?

While this scoping review offers valuable insights into the role of shared book reading in early speech and language development, several limitations should be acknowledged.

A notable limitation across many of the included studies was the predominance of cross-sectional designs, which restrict the ability to draw causal inferences or examine developmental trajectories over time. Longitudinal research is essential to understand how shared reading behaviours evolve and influence language outcomes over extended periods.

Several studies lacked detailed reporting on the intervention dosage, particularly about reading frequency, session duration, and strategy adherence in home settings. Although caregivers were often encouraged to read daily, few studies incorporated objective measures to verify compliance. The absence of audio or video recordings meant that data on how caregivers conducted shared reading were largely reliant on self-report, which may be prone to bias or inaccuracies.

The sample characteristics in some studies also limit generalizability. Several investigations drew participants from a single geographic location or a specific intervention programme, and a few relied on small samples, potentially underpowering their ability to detect meaningful effects. In one study, socioeconomic disparities between comparison groups may have confounded results, further complicating interpretation.

The types of books and digital reading formats varied considerably, yet were not always clearly described or standardized. These limitations highlight the need for future research to employ rigorous, longitudinal methodologies with consistent reporting of intervention fidelity and book characteristics. More robust, representative, and ecologically valid designs will strengthen the evidence base and enhance our understanding of how shared book reading can be optimized to support early speech and language development.

Implications and Future Directions

The findings of this review underscore the importance of shared book reading as a developmentally appropriate,

low-cost, and accessible intervention for promoting early language skills. Clinicians, educators, and caregivers should be encouraged to adopt dialogic reading strategies during shared reading. Future research should prioritize intervention parameters (e.g., dosage, book characteristics, strategy use) and explore longitudinal effects of early shared reading on later language and literacy outcomes.

CONCLUSION

This scoping review highlights the positive impact of shared book reading on the speech and language development of children aged 0 to 36 months. The evidence supports that early and interactive reading experiences contribute meaningfully to preverbal, receptive, and expressive communication. While daily reading is optimal, child's interest and engagement, book characteristics, and caregiver strategies also play critical roles in determining outcomes. Semantically rich print books to enhance verbal output, and books with images in isolation to support receptive vocabulary, aligned with the child's interests, and used alongside dialogic techniques, are especially effective. However, variations in study design, measurement tools, and reporting practices limit broader conclusions. Future research should adopt more rigorous, longitudinal approaches to better understand how shared reading shapes early language development and to refine best practices for early intervention.

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REFERENCES

- Aina. (2024, July 16). Engaging Storybooks Every Preschooler Should Hear. Little Playhouse Preschool and Childcare Centre <https://littleplayhouse.com.my/engaging-storybooks-every-preschooler-should-hear/>
- Bergström, E., Anna Sofia Bratt, & Svensson, I. (2024). An interactive shared reading intervention designed for preverbal infants: A feasibility study exploring early language and cognitive development. *Child Language Teaching and Therapy*, 40(3). <https://doi.org/10.1177/02656590241250234>
- Brain Plasticity & Early Intervention: "Neurons that fire together, wire together." (2022, February 10). LEARN Behavioral. <https://learnbehavioral.com/blog/brain-plasticity-2>
- Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husén & T. N. Postlethwaite (Eds.), *The international encyclopedia of education* (2nd ed., Vol. 3, pp. 1643–1647). Pergamon Press.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner (Ed.), *Handbook of child psychology: Theoretical models of human development* (6th ed., Vol. 1, pp. 793–828). Wiley.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513–531. <https://doi.org/10.1037/0003-066X.32.7.513>
- Bus, A. G., van IJzendoorn, M. H., & Pellegrini, A. D. (1995). *Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy*. Review of Educational Research, 65(1), 1–21. <https://doi.org/10.3102/00346543065001001>
- Cates, C. B., Dreyer, B. P., Berkule, S. B., White, L. J., Arevalo, J. A., & Mendelsohn, A. L. (2012). Infant communication and subsequent language development in children from low-income families: The role of early cognitive stimulation. *Journal of Developmental and Behavioral Pediatrics: JDBP*, 33(7), 577–585. <https://doi.org/10.1097/DBP.0b013e318264c10f>
- Chang, C. S., Hsieh, F.-J., Chen, T., Wu, S. C., Tzeng, O. J. L., & Wang, S. (2022). Revisiting dialogic reading strategies with 12-month-old infants. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-022-01385-4>
- Cheryl Jialing Ho, Duursma, E., & Herbert, J. S. (2023). Mother–infant shared book reading in the first year of life. *Infant and Child Development*. <https://doi.org/10.1002/icd.2465>
- Deguire, F., López-Arango, G., Knoth, I. S., Côté, V., Agbogba, K., & Lippé, S. (2022). Developmental course of the repetition effect and change detection responses from infancy through childhood: a longitudinal study. *Cerebral Cortex*, 32(23), 5467–5477. <https://doi.org/10.1093/cercor/bhac027>
- Dicataldo, R., & Roch, M. (2022). How Does Toddlers' Engagement in Literacy Activities Influence Their Language Abilities? *International Journal of Environmental Research and Public Health*, 19(1), 526. <https://doi.org/10.3390/ijerph19010526>
- Dong, Y., Chow, B. W.-Y., Mo, J., Miao, X., & Zheng, H.-Y. (2024). Effects of dialogic reading elements on children's language development. *Journal of Research in Reading*, 47(2), 181–200. <https://doi.org/10.1111/1467-9817.12447>
- Duursma, E., Augustyn, M., & Zuckerman, B. (2008). Reading aloud to children: the evidence. *Archives of Disease in Childhood*, 93(7), 554–557. <https://doi.org/10.1136/adc.2006.106336>
- Dowdall, N., Murray, L., Skeen, S., Marlow, M., De Pascalis, L., Gardner, F., Tomlinson, M., & Cooper, P. J. (2021). Book-Sharing for Parenting and Child Development in South Africa: A Randomized Controlled Trial. *Child Development*, 92(6), 2252–2267. <https://doi.org/10.1111/cdev.13619>
- Fernald, A., & Simon, T. (1984). Expanded intonation contours in mothers' speech to newborns. *Developmental Psychology*, 20(1), 104–113. <https://doi.org/10.1037/0012-1649.20.1.104>

- Karousou, A., & Economacou, D. (2024). Quantity and quality of book reading to infants and toddlers: their effect on early communication and language development. *Psychology: The Journal of the Hellenic Psychological Society*, 29(1), 1–27. https://doi.org/10.12681/psy_hps.34486
- Lorio, C. M., Delehanty, A. D., & Romano, M. K. (2021). A Systematic Review of Parent–Child Shared Book Reading Interventions for Infants and Toddlers. *Topics in Early Childhood Special Education*, 42(3), 027112142199879. <https://doi.org/10.1177/0271121421998793>
- Madhavan, R., & Mani, N. (2024). The quality of caregiver–child interaction is predicted by (caregivers’ perception of) their child’s interests. *Royal Society Open Science*, 11(4). <https://doi.org/10.1098/rsos.231677>
- Marjanovič-Umek, L., Fekonja-Peklaj, U., & Sočan, G. (2016). Early vocabulary, parental education, and the frequency of shared reading as predictors of toddler’s vocabulary and grammar at age 2;7: A Slovenian longitudinal CDI study. *Journal of Child Language*, 44(2), 457–479. <https://doi.org/10.1017/s0305000916000167>
- Mol, S. E., & Bus, A. G. (2011). To read or not to read: A meta-analysis of print exposure from infancy to early adulthood. *Psychological Bulletin*, 137(2), 267–296. <https://doi.org/10.1037/a0021890>
- Munzer, T. G., Miller, A. L., Weeks, H. M., Kaciroti, N., & Radesky, J. (2019). Differences in Parent-Toddler Interactions With Electronic Versus Print Books. *Pediatrics*, 143(4). <https://doi.org/10.1542/peds.2018-2012>
- Murray, L., De Pascalis, L., Tomlinson, M., Vally, Z., Dadomo, H., MacLachlan, B., Woodward, C., & Cooper, P. J. (2016). Randomised controlled trial of a book-sharing intervention in a deprived South African community: Effects on carer-infant interactions, and their relation to infant cognitive and *Journal of Applied Developmental Psychology*, 54, 69–83. <https://doi.org/10.1016/j.appdev.2017.12.001>
- Salley, B., Brady, N. C., Hoffman, L., & Fleming, K. (2019). Preverbal communication complexity in infants. *Infancy*, 25(1), 4–21. <https://doi.org/10.1111/inf.12318>
- Salley, B., Daniels, D., Walker, C., & Fleming, K. (2022). Shared book reading intervention for parents of infants and toddlers. *Journal of Early Childhood Research*, 20(3), 322–340. <https://doi.org/10.1177/1476718x221091462>
- Sengpiel, F. (2007). The critical period. *Current Biology*, 17(17), R742–R743. <https://doi.org/10.1016/j.cub.2007.06.017>
- Shelton, L. (2018). *The Bronfenbrenner Primer*. Routledge.
- ShIPLEY, K. G., & McAFEE, J. G. (2021). *Assessment in speech-language pathology: A resource manual*. Plural Publishing, Inc.
- Tierney, A. L., & Nelson, C. A. (2009). Brain Development and the Role of Experience in the Early Years. *Zero to Three*, 30(2), 9. <https://pubmed.ncbi.nlm.nih.gov/articles/PMC3722610/>
- Tricco, A. C., Lillie, E., Zarin, W., O’Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., & Lewin, S. (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/M18-0850>
- Ünlütöbak, B., Aktan-Erciyes, A., Yılmaz, D., Kandemir, S., & Göksun, T. (2022). Parental input during book reading and toddlers’ elicited and spontaneous communicative interactions. *Journal of Applied Developmental Psychology*, 81, 101436. <https://doi.org/10.1016/j.appdev.2022.101436>
- Vogler-Elias, D. (2013). *Shared Storybook Reading*. 2850–2854. https://doi.org/10.1007/978-1-44191698-3_507
- Weber, J., & Colunga, E. (2022). Learning from Word Books: Does the Type of Illustration Matter? *Proceedings of the Annual Meeting of the Cognitive Science Society*, 44(44). <https://escholarship.org/uc/item/5kv5g42x>
- National Institute on Deafness and Other Communication Disorders. (2022). Speech and language developmental milestones. NIDCD. <https://www.nidcd.nih.gov/health/speech-and-language>
- O’Farrelly, C., Doyle, O., Victory, G., & Palamaro-Munsell, E. (2018). Shared reading in infancy and later development: Evidence from an early intervention.