

Reading aloud to children: the evidence

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Promoting healthy child development lies at the heart of paediatric practice, yet a major challenge facing the field is applying evidence based standards. However, the evidence is clear as regards reading aloud to children. Ample research demonstrates that reading aloud to young children promotes the development of language and other emergent literacy skills,¹⁻⁴ which in turn help children prepare for school.⁵⁻⁵

READING ALOUD AND CHILDREN'S EMERGENT LITERACY AND LANGUAGE SKILLS

Reading aloud to children or shared book-reading has been linked to young children's emergent literacy ability, which can be defined as the skills or knowledge that children develop before learning the more conventional skills of reading and writing⁶⁻⁸ which affect children's later success in reading.⁹

During shared bookreading, children learn to recognise letters, understand that print represents the spoken word, and learn how to hold a book, turn the page and start at the beginning.¹⁰⁻¹² Shared bookreading is also associated with learning print concepts¹¹ and exposing children to the written language register, which is different from spoken language,¹³ as well as story structures (eg, stories have a beginning, middle and end) and literacy conventions such as syntax and grammar which are essential for understanding texts.¹⁴ These emergent literacy skills are important for later success in reading.^{2 15}

PHONOLOGICAL AWARENESS AND ALPHABET KNOWLEDGE

Phonological awareness (the ability to manipulate the sounds of spoken language¹⁶⁻¹⁸) is another important prerequisite for learning to read. To read words, children need to know the rules for translating print into meaningful

sounds.^{8 16} For example, preschoolers' sensitivity to alliteration and rhyme at age 4-5 contributed to progress in reading and spelling at age 6-7.¹⁹ Children's knowledge of nursery rhymes at age 3-4 is related to detecting alliteration and rhyme at ages 4-7.²⁰ Many parents naturally promote awareness of sound patterns by emphasising rhyming words and patterns when reading to a child.²¹ When children do well at detecting and manipulating syllables, rhymes and phonemes, they tend to learn more quickly to read.^{15 19 22}

Children acquire sensitivity to different sounds in a specific order, although stages tend to overlap.²³ Children can learn about phonemes or sounds more or less informally by learning to name letters and by recognising which phoneme is critical in the name.²⁴ Many alphabet books, for example, contain the letter name accompanied by pictures of objects whose names begin with the critical sound, such as D, for example a dog, deer or doctor. When parents stress the initial sounds in these words while reading with their children, they are teaching awareness of initial phonemes or shared phonemes across words.^{24 25} Since children who have difficulty with phonological awareness can develop reading difficulties,^{1 26} parents might help to prevent these difficulties by exposing children to a wide variety of literacy materials and helping them become aware of the relationship between letters and sounds.

In addition to being aware of sounds, children also need to recognise the role that alphabet letters play and that letters have different sounds. It is easier to learn these letter-sound relationships once children know at least some alphabet letters and are able to recognise words that start with the same phoneme.²⁷ While shared bookreading promotes children's alphabet knowledge,¹⁰ most parents focus on the meaning of the story and not the print.²⁸ Also, while knowing the names of letters is not itself related to reading ability, it is knowing the sound of letters (eg, the letter 'b' sounds like 'ba') that is important.

There are important differences in letter knowledge between children from middle class and lower class families. Four-year-old

children from middle class families knew an average of 54% of the letter names and 5-year-old children knew 85% of the letters.²⁹ However, 4- and 5-year-old children from low-income families who enter programs such as Head Start know on average four letters and learn an additional five while enrolled in the program.^{24 30} Alphabet and counting books for young children promote greater focus on the print.¹⁰

READING ALOUD AND LANGUAGE DEVELOPMENT

Studies demonstrate a relationship between oral language skills such as vocabulary, syntactic (the way in which linguistic elements such as words are combined to form sentences) and semantic (focus on the meaning of words or sentences) processes, and narrative discourse processes such as memory, storytelling and comprehension,⁹ and reading ability.³¹ All of these contribute to word recognition and reading comprehension.^{32 33}

Children's oral language skills can be stimulated by parent-child literacy activities such as shared bookreading.³⁴ Children learn the meaning of new words during bookreading interactions with their parents.³⁵ Reading aloud familiarises children with the language found in books³⁶ and stimulates vocabulary growth.^{37 38} Books contain many words, especially the more sophisticated words that children are unlikely to encounter frequently in spoken language.³⁹ Children's books contain 50% more rare words than prime-time television or even college students' conversations.⁴⁰ Shared bookreading can stimulate more verbal interaction between child and parent, and therefore children's language development is likely to profit more from reading aloud than from toy play or other adult-child interactions.^{12 41} In addition to new vocabulary, children are exposed to the more complex language adults use interacting with children around a book.^{11 42 43}

Children with greater vocabulary knowledge and understanding of spoken language tend to have less trouble with reading.^{6 31} Large social class differences have been reported in children's exposure to oral language and their vocabularies. Hart and Risley reported that at age 3, children in professional families heard an average of 2153 words per hour, while children in working class families heard 1251 words per hour and children in welfare families heard only 616 words per hour.⁴⁴ This led to enormous differences in children's vocabularies. At age 3,

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children in professional families had an observed cumulative vocabulary of 1100 words, while children in working class families had an observed vocabulary of 750 words and those in welfare families of just above 500 words. In professional families, parents not only talked more but also used more different words and provided a greater richness of nouns, modifiers and verbs. Parents spent a lot of time and effort asking their children questions, affirming and expanding their responses and encouraging their children to listen and notice how words relate and refer in order to prepare their children for a culture focusing on "symbols and analytic problem solving" (see Hart and Risley,⁴⁴ p 133). On the other hand, parents on welfare spent less time talking while they more frequently initiated topics and used more imperatives and prohibitions. These parents were more concerned with established customs such as obedience, politeness and conformity. Working-class families showed a mixture of the two cultures using imperatives and prohibitives while using rich language to label, relate and discuss objects.⁴⁴

Shared bookreading provides children with opportunities to learn vocabulary from books as well as the use of decontextualised language (the use of language to communicate new information to those who have little experience with the context of the information).^{45 46} Since this task involves cognitive and linguistic demands, it tends to be more challenging for children.⁵ The positive effects of having been read to from an early age continue to be observable in the elementary school years.^{3 12} The age at which parents begin reading to their children is correlated with children's language development; children who are read to from an early age tend to have higher scores on language measures later on.^{47 48}

READING ALOUD AS A SHARED EXPERIENCE

An added dimension of reading aloud is that it involves parents and other important adults to the child in a focused interaction. Early parent-child relationships influence children's engagement in literacy activities. Mothers with securely attached children tend to more frequently provide a rich and interactive way of reading to their children than mothers of insecurely attached children.^{10 49-51} Children not only acquire knowledge about narratives but also learn about their own personal narrative when sharing a book with an adult, something that is important for their self-esteem.

Bookreading can play an important role in wake and sleep patterns by making bookreading part of bedtime routines. Sharing books with children can also help them learn about peer relationships, coping strategies, building self-esteem and general world knowledge.

Reading aloud likely promotes joint attention, which has many potential benefits related to reading,⁵² such as enhancing receptive language by asking children to point, touch or show during bookreading or expressive language by asking children questions about the text.⁵

FACTORS INFLUENCING QUANTITY AND STYLE OF SHARED BOOKREADING

Similar to child health problems, certain "risk" factors such as socioeconomic status, race/ethnicity and parental education can affect children's development of emergent literacy and oral language skills. The National Center for Education Statistics (NCES), for example, found that children in families with incomes below the poverty threshold are less likely to show signs of emergent literacy skills such as pretending to read and write.⁵³ A total of 28% of children aged 3-5 years who were not living in poverty were able to recognise all the letters of the alphabet, while only 10% of children living in poverty were able to do so. In addition, 45% of children not living in poverty showed three or more signs of emerging literacy, while only 19% of children living in poverty did so.⁵³

Associated with these lower levels of emergent literacy skills is less exposure to bookreading and print. Children from low-income families often participate less frequently in shared bookreading than children from higher socioeconomic groups.^{54 55} According to the Federal Interagency Forum on Child and Family Statistics, 64% of families whose incomes were at or above the poverty level read to their preschoolers on a daily basis compared to 48% of families below the poverty level.⁵⁶

Children in low-income families often have less access to printed materials in the home,⁵⁴ which likely impairs children's early language and literacy development and later reading achievement.⁴⁸ The 2007 Nation's Report Card on reading showed that children from low-income families had lower reading scores in grade 4 and grade 8 than their peers from middle class families.⁵⁷ When children are poor readers at the end of first grade the probability that they will remain poor readers by the end of fourth grade has been reported to be as high as 0.88.⁵⁸

The National Research Council's Committee on the Prevention of Reading Difficulties in Young Children stated that most reading difficulties can be prevented by ensuring that all children, in particular those at risk for reading difficulties, have access to early childhood environments that promote language and literacy development and encourage those skills needed to learn to read.³ It is essential to start promoting those skills needed to prepare for school early on by, for example, having parents read to their children.³

Low-income parents often have lower levels of education. The link between maternal education and frequency of shared bookreading is well documented. Mothers with higher levels of education are more likely to read frequently to their children than mothers with lower levels of education.^{59 60} In addition to social economic status (SES) which is based on family income, education and occupation, other factors such as race/ethnicity and language spoken at home play a role in parental bookreading practices. Hispanic non-English speaking mothers are less likely to read to their children compared to white, African-American or Hispanic English-speaking mothers.^{61 62}

QUALITY OR STYLE OF SHARED BOOKREADING

It is important for parents to keep children's personal interests and motives in mind when trying to get children interested in books.^{63 64} When children's encounters with literacy are pleasant, they are more likely to develop a positive disposition towards reading frequently and broadly.⁶³ Children who experience shared reading from an early age tend to be more interested in reading at age 4 and 5 than children who receive shared bookreading when they are older.⁶³

It is not only the reading itself that is important – the type of conversations adults and children have during shared bookreading, as well as the emotional quality of the interactions and the discussions related to print are even more important.⁶⁵ It is not sufficient to simply read a text aloud in order to encourage children to learn from being read to. When parents are supportive when interacting with their children around books, this affects how children engage with books.⁶⁶

The style of reading, more than the frequency, impacts children's early language and literacy development.⁶⁷ White middle class parents tend to use a more interactive style when reading to their children. Working class non-white parents, on the other hand, tend to focus

more on labelling and describing pictures during bookreading.^{68 69} These differences in reading styles can impact children's development of language and literacy-related skills.

Two parental styles of reading were identified as having beneficial effects on child vocabulary and print skills: the describer style and the performance-oriented style. A describer style focuses on describing the pictures during reading and a performance-oriented style focuses on discussing the meaning of the story after completion.⁷⁰ Children with initial lower levels of vocabulary profited more from the describer style, while children with higher initial vocabulary levels profited most from the performance-oriented style.⁷⁰

Whitehurst *et al* developed an intervention program called dialogic reading to promote children's language development.^{38 71} Adults are taught specific techniques that can be used during shared bookreading. These techniques focus on asking questions, providing feedback and letting the child become the narrator of the story.^{38 71} Children whose parents received training in dialogic reading had significantly better expressive language skills, used longer and more utterances, and had lower frequency of single words than children whose parents did not use dialogic reading. These differences between the groups remained even 9 months after the training.³⁸

One of the most powerful pieces of shared reading is what happens in the pauses between pages and after the book is closed. The use of "decontextualised" or non-immediate talk and active engagement has proven to be particularly beneficial for children's language enhancement.^{70 72-74} Non-immediate talk is talk that goes beyond the information in the text or the illustrations, for example, to make connections to the child's past experiences or to the real world (eg, "you like ice cream"), or to offer explanations (eg, "he cried because he was sad"), including explanations of word meanings (eg, "a piglet is a baby pig"). Mothers' use of non-immediate talk while reading to their preschoolers was related to children's later performance on measures of vocabulary, story comprehension, definitions and emergent literacy.⁷³ Engaging in book discussions that include non-immediate talk gives children the opportunity to understand and use the more sophisticated words required to make predictions, to describe the internal states of the characters and to evaluate the story.⁷³ It also provides the opportunity for children to learn to talk about

their own feelings. Children's early language and literacy development benefits more from actively engaging the child during shared bookreading than by simply reading the text.^{70 75}

A CHALLENGE FOR PAEDIATRIC CLINICIANS

What are the implications of the importance of parents reading aloud to their children's development for child health clinicians? "Reach Out and Read (ROR)", founded at Boston City Hospital in 1989, promotes early childhood development by promoting reading aloud. In response to the small percentage of low-income parents reading to their children, ROR was created to involve child health clinicians by having them give new books to children and advice to parents about the importance of reading aloud as part of well child care. In an early study among inner city parents receiving ROR, researchers found that parents who had been given a children's book during a previous visit were four times more likely to report looking at books with their children or that looking at books was a favourite activity.⁷⁶ Among Spanish-speaking immigrant families, those who had been exposed to ROR reported a doubling in the rate of frequent book sharing, defined as reading aloud 3 or more days per week.⁷⁷ In the largest study to date of this program, in a national sample (multi-site evidence from 19 clinical sites in 10 states) of parents of children age 6–72 months, implementation of ROR programs was associated with increased parental support for reading aloud.⁷⁸ Most importantly, two studies show increased language development.^{79 80}

Health practitioners who do not have access to ROR can help families by asking them about bookreading in the family, and by telling parents about the benefits and joy of sharing a book with their child. In addition, they can demonstrate ways of reading that are particularly beneficial to young children (eg, connecting the book with the child's world, making predictions).

SUMMARY

Reading aloud to young children, particularly in an engaging manner, promotes emergent literacy and language development and supports the relationship between child and parent. In addition it can promote a love for reading which is even more important than improving specific literacy skills.⁸¹ When parents hold positive attitudes towards reading, they are more likely to create opportunities for their children that promote

positive attitudes towards literacy⁸² and they can help children develop solid language and literacy skills. When parents share books with children, they also can promote children's understanding of the world, their social skills and their ability to learning coping strategies. When this message is supported by child health professionals during well child care and parents are given the tool, in this case a book, to be successful, the impact can be even greater. This effect may be more important among high risk children in low income families, who have parents with little education, belong to a minority group and do not speak English since they are less likely to be exposed to frequent and interactive shared reading.

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