

Supporting the Paediatric Development of Children's Literacy: Phonological Awareness

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Abstract

As primary caregivers, paediatricians have the opportunity to promote parental behavior and practices for young children's literacy advancement. This article provides information and strategies to help paediatricians advise and assist parents for the development of a key foundational skill of early literacy, phonological awareness.

Keywords: Parental Practices; Literacy Development; Paediatrician Support; Phonological Awareness

The Importance of Children's Literacy Development

Literacy has been defined as "the ability to use printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" [1]. This definition emphasizes the importance of: 1) development of the foundational skills of reading and writing, which 2) enable a person to use those skills for the betterment of life and society. Literacy is the key that unlocks learning. Literacy is involved in more than 85% of all other learning in every content area such as math, science, and social studies [2].

All that we can learn or do is made more accessible by proficient reading and writing skills. A lack of proficiency creates barriers. The differences between the haves and the have nots in literacy begins early in life. Visit any kindergarten classroom and you will already see these barriers in place. One child knows every letter of the alphabet and can read simple books; another child cannot even recognize his own name in print. Unfortunately these gaps will continue to build, creating obstacles that are difficult (and sometimes impossible) to overcome.

Known as the Matthew Effect, the rich get richer and the poor get poorer in connection with literacy skills [3]. Those with stronger skills in literacy will read more, write more, and learn more. By the fourth grade, the top 10% of children in each class read and comprehend 10 times more words than the children in the bottom 10% [2]. In fact, children that have poor reading skills at the end of first grade have an 88% probability of being a poor reader in fourth grade [4]. Children with low literacy achievement typically exhibit more behavioral and social problems throughout their years of school [5]. A child who can't read on grade level by third grade is four times less likely to graduate high school than a child with proficient reading skills [6]. These children who lack proficient literacy skills: emerge into society as adults lacking the single prerequisite for managing their lives and acquiring additional training. They are chronically unemployed, underemployed, or unemployable. They form the single largest identifiable group of those whom we incarcerate, and to whom we provide assistance, housing, medical care, and other social services. They perpetuate and enlarge the problem by creating another generation of poor readers" [7].

Approximately 40 million adults in the U.S. read and write at or below the fifth-grade level and 26% lack the basic literacy skills required for a typical job [8,9]. The impact of the lack of literacy development is heart-wrenching. Since proficiency is so pivotal, the effort to develop the skills of reading and writing should begin at birth to prevent the loss of self-esteem, happiness, and potential in the lives of children [10].

Fortunately, there is a wealth of evidence of that shows how we can promote foundational literacy skills in young children. Early learning has the power to transform children's lives. A child's early years are a critical period in the development of skills that will impact learning throughout the child's entire life. Long before beginning kindergarten, a child can develop foundational skills in literacy that serve to promote future academic success.

As a primary caregiver, and perhaps one of the first professional people to interact with parents and their infant, paediatricians have the opportunity to promote parental behavior and practices for literacy development. This article aims to provide information and strategies that help paediatricians advise and assist parents for the development of literacy skills for young children.

Phonological Awareness-A Key Foundational Skill of Literacy

Phonological awareness is a key foundational skill of literacy. In fact, phonological awareness is one of the few skills identified to have a causal effect on literacy rather than a correlational effect [11]. In essence, this means that neither reading nor writing can occur without phonological awareness.

Research evidence, collected over several decades, has clearly established that emerging readers must have a solid foundation in phonological awareness. We have also learned that the primary cause of dyslexia is rooted in difficulty with phonological processing-processing the distinctive sounds of language [12]. Additionally, it has been shown that phonological awareness is a more significant predictor of literacy skills than IQ or socio-economic status [13,14]. Development of phonological awareness skills will also serve useful to linguistically diverse children and children from multilingual families. The relationship of phonological awareness and literacy acquisition is well-established for monolingual readers across various languages (e.g., English, Spanish, Chinese, Turkish, etc.) [15]. Importantly, phonological awareness skills also transfer across languages. Research has demonstrated a robust cross-language transfer of phonological awareness skills for French/English, Italian/English, and Korean/English, Spanish/English, and other languages [16]. For example, a child's phonological awareness skills in Spanish predict ability to read words in English [17]. As there is a cross-language transfer of phonological skills from first language to a second language and vice versa, phonological awareness can be developed in a child's home language and school language with expected benefits [18]. A focus on developing phonological awareness will assist the development of literacy skills in monolingual and multilingual children [19]. Given the increasing proportion of linguistically diverse students (e.g., an estimated 5 million Spanish-speaking children under the age of five in the United States by 2025 [20]), supporting the development of the shared phonological processes of literacy is an important consideration for paediatricians.

What is Phonological Awareness

Phonological awareness is an umbrella term with several sub-components. Overall, phonological awareness is the ability to hear, identify, and manipulate sounds in spoken language [21]. There are five different levels of phonological awareness. Ranging from the easiest to the most difficult, these levels are:

- Word-recognition that speech and sentences are composed of individual words (e.g., counting the number of words in a sentence).
- Rhyme-recognition of identical final sound structure of rhyming words (e.g., of these three words, fan, dog, can – fan and can have the same final sound pattern).

- Syllable-recognition of the word parts (syllables) in a single word (e.g., the word family has three word parts, fam-i-ly).
- On-set and rime-recognition of a word's onset and rime. A rime is the part of the word that begins with a vowel and the consonants that follow it. The onset is the consonant or consonant combination that precedes the vowel (e.g., the words g/oat and fl/oat differ by the onset and have the same rime, oat).
- Phoneme-recognition of phonemes, the smallest unit of sound that makes a difference in the meaning of words (e.g., the word duck has three phonemes, /d/u/k/).

How Can We Develop Phonological Awareness in A Child's Early Years

Parents and caregivers play a crucial role in developing phonological awareness in young children. Through simple songs, rhymes, and word play, young children develop this important skill of sensitivity to the sound structure of language [22]. Informal phonological awareness 'lessons' should be brief, engaging, and fun for children. Below are some ideas that can be incorporated into daily activities with relative ease. After introducing these songs, rhymes, and word games through books and interactions, many of these phonological awareness activities can be used while traveling in the car, waiting in the grocery line, and during other brief periods. Paediatricians might also consider purchasing some of these books to promote patients' development of phonological awareness during time spent in the waiting room.

Simple Songs and Chants

Simple songs and chants are an excellent way to build phonological awareness. Young children especially enjoy songs and chants that include motion. Ideas for these might come from books; some are old favorites sung by generations. Here are three resources for simple songs and chants.

- This Little Piggy: And Other Favorite Action Rhymes by Hannah Wood
- Five Green and Speckled Frogs: A Count-and-Sing Book Board book by Priscilla Burris
- The Wheels on the Bus by Jerry Smath

Nursery Rhymes

Reading aloud nursery rhymes expose young children to the sounds of language. Even an infant can listen as a parent recites a nursery rhyme with emphatic expression. Here are some books for reading aloud nursery rhymes to young children with simple verses and bright, colorful illustrations.

- My First Mother Goose Board book by Tomie dePaola
- A Children's Treasury of Nursery Rhymes by Linda Bleck
- Mary Engelbreit's Mother Goose: One Hundred Best-Loved Verses by Mary Engelbreit

Word Games

Word games can serve to build phonological awareness. Parents can use the following ideas as starters and create additional word play activities unique to their child.

Sentence Build and Clap

Clapping the number of words in sentences helps children to recognize that sentences are created from words. For example, a parent creates a three-word sentence (I like cats). The parent and child then clap the number of words in the sentence. Next, parent and child build on the three-word sentence to create a four-word sentence (I like black cats.) and clap the words in the sentence. A spin on this is to

create a four-word sentence and have the child change it a three-word sentence that still makes sense (I like cats or I like black, referring to the color black, would work in this example).

Rhyme Time

This activity helps child develop the ability to recognize rhyme in words. There are at least three variations on this game.

- Rhyme Match-parent provides the child two words and asks the child if the words have the same sound pattern or rhyme. For example, parent says, "Man, tan." Child says, "Rhyme." Parent says, "Man, fish." Child says, "No rhyme."
- Odd Ball Out-parent provides the child three words and asks the child to identify the oddball (the one word that has a different sound pattern or rhyme). For example, parent says, "Cat, sun, bat." Child says, "Sun is the oddball."
- Mix-up Rhymes-parent uses a nonsense word that rhymes with the real word. For example, the parent says, "I want to eat something that rhymes with mookie." Child says, "Cookie."

Sound Hunt

This game is similar to "I Spy," but uses the sounds in words. For example, the parent says, "I spy something that begins with the sound /t/." After looking around the room, the child might answer, "Table." Roles are then reversed with the child providing the "I spy" and the parent providing the answer. Note: this game focuses on the phoneme level and will require assistance from the parent for the child to develop this sophisticated skill.

Conclusion

The strong association between phonological awareness skills and literacy achievement is well-established. Paediatrics can play a vital role in furthering this development. The presence of phonological awareness is a hallmark of good readers and writers; its deficiency consistent of poor readers and writers [23]. Promoting the development of phonological awareness, especially for children with potential risk for successful literacy acquisition, is of critical importance. Activities to promote early literacy are less common in the homes of some children, with observational studies showing more than a 400% difference; this difference is especially pronounced in low-income homes [24,25]. Fortunately, phonological awareness activities such as the ones presented in this article help young children develop this foundational skill of literacy. Even small changes in the early years to promote phonological awareness translate into progressively larger differences at later ages [26]. As paediatricians assist parents in promoting this crucial foundational skill, they will serve to facilitate subsequent acquisition of reading and writing skills in the lives of their young patients.

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