Enhancing Interactions With Children With Autism Through Storybook Reading: A Caregiver’s Guide

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Introduction: Connor

Connor is a 4-year-old boy with autism. He attends preschool for half the day and spends the rest of the day with his mother, Pamela. Although Connor has two older siblings, he likes to play alone. He spends the majority of his time playing with space-themed toys, such as planets and space shuttles, as they are items of high interest to him. Connor uses one- or two-word utterances to communicate with others. He sees Kim, a behavior interventionist, twice a week. She works with Connor on his communication skills and his ability to interact with others. Kim has a great relationship with Connor and his mother. Although they have seen tremendous improvements in his social and communicative skills, Pamela and Kim understand the importance of continuing these interventions.

Pamela enjoys reading with her children and understands the impact it has on their vocabulary and language skills. Pamela also enjoys the quality time this interactive activity provides. Pamela reads books to Connor, although he does not interact with her in the way that her older, typically developing children do. Always the advocate for her children, Pamela asks Kim for tips on how to make story time with Connor a more interactive experience.

Kim understands that shared storybook reading is a successful, evidence-based intervention for all children. She provides Pamela with some simple strategies that can be implemented during story time that will help Pamela and Connor interact with each other and the storybook.

Autism

According to the Centers for Disease Control and Prevention (2014), an average of 1 in 68 children has an autism spectrum disorder (ASD), a number that has continued to grow over the last two decades. Autism is often characterized as a neurological disorder in which a person has difficulty in his or her social and communicative development. People on the spectrum often have stereotyped patterns of behavior and/or interest (American Psychiatric Association, 2013). Due to the trouble with their social and communicative development, children with ASD frequently display language delays and impairments.

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Importance of Early Literacy Experiences

The term *emergent literacy* refers to the reading and writing behaviors that precede and later grow into conventional literacy skills (Teale & Sulzby, 1986). Whitehurst and Lonigan (1998) report that the emergent literacy knowledge and skills children receive from their preschool and home life experiences are strongly correlated with their later academic performance. For young children to acquire these early literacy skills, interventions and activities (e.g., storybook reading) must focus on phonological awareness, print awareness, letter recognition, and oral language (Johnston, McDonnell, & Hawken, 2008).

Table 1 provides definitions and examples of emergent literacy skills. Children’s success in later schooling can weigh heavily on the development of early literacy skills (Justice & Kaderavek, 2002). Therefore, it is important that children are exposed to meaningful activities, experiences, and opportunities that facilitate emergent literacy early in the fundamental years of their development. Unfortunately, children with ASD are not as frequently exposed to these types of activities as compared with their typically developing peers (Johnston et al., 2008; Lane & Wright, 2007).

**Why Children With Autism Have Fewer Literacy Experiences**

Children with ASD are exposed to fewer literacy experiences in both the home and school environments due to their delayed social and communicative interaction skills. (Basil & Reyes, 2003; Koppenhaver

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**Table 1**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Examples of how to embed emergent literacy skills during storybook reading</th>
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</thead>
<tbody>
<tr>
<td>Phonological awareness</td>
<td>One’s ability to acknowledge structures of sounds that are heard in spoken language (Beauchat, Blamey, &amp; Walpole, 2009; Hay &amp; Fielding-Barnsley, 2007).</td>
<td>• Caregiver points out rhyming words, initial sounds, syllables, and phonemes heard throughout the story.</td>
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<td></td>
<td></td>
<td>• Ask the child to point out rhyming words.</td>
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<td>• Ask the child to identify additional rhyming words.</td>
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<tr>
<td>Print awareness</td>
<td>The ability to recognize the function and form of print and the relationship between oral and written language (Justice &amp; Ezell, 2002).</td>
<td>• Point out that when you read, you follow a left to right and top to bottom pattern.</td>
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<td>• Explain to the child where a sentence begins and ends.</td>
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<td></td>
<td>• Have the child point to where a new sentence begins.</td>
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<tr>
<td>Letter recognition</td>
<td>Also referred to as alphabet knowledge, is a child’s understanding of alphabetic units, can discriminate the features of letters as well as being able to name each individual letters (Justice &amp; Ezell, 2002).</td>
<td>• Point to a letter and ask the child to name that letter.</td>
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<td></td>
<td></td>
<td>• Point to a letter and ask the child to make the sound that the letter makes.</td>
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<td></td>
<td></td>
<td>• Model the sound if he or she does not know the sound.</td>
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<tr>
<td>Oral language</td>
<td>This term is often associated with vocabulary; in its broadest definition, it consists of phonology, grammar, morphology, discourse, and pragmatics (Beauchat et al., 2009).</td>
<td>• When encountering an unfamiliar world, create a child friendly definition (Fatigued is when you are very tired and sleepy).</td>
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</tbody>
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“Children with ASD are exposed to fewer literacy experiences in both the home and school environments due to their delayed social and communicative interaction skills.”
Because the nature of this disorder is so complex, many caregivers do not know how to create effective communicative interactions (Bellon, Olgetree, & Harn, 2000). This is demonstrated in the interactions between Connor and his mother. For example, when Pamela reads *Green Eggs and Ham*, by Dr. Seuss to Connor, she finds herself only reading the text on the page. When Pamela asks questions about the text (e.g., “Do you like green eggs and ham?”), Connor rarely answers. He does not attend to the book and acts uninterested. Yet, when Pamela reads the same story to her older children, they participate and interact with one another. Pamela and her two older children laugh together, and the children point out pictures and respond to Pamela’s questions about the text. The successful natural interactions Pamela has with her older children are not experienced with Connor.

Storybook reading is a social activity. Therefore, children with ASD may have increased difficulties interacting during story time due to their deficits in social and communicative development. One way Pamela can successfully engage Connor in story time is by becoming more purposeful in the ways she elicits participation.

Importance of Shared Storybook Reading

Beauchat, Blamey, and Walpole (2009) broadly define shared storybook reading as “all instances when a caregiver reads to a child or children, pausing to engage in discussion about the text” (p. 127). The National Early Literacy Panel (NELP; 2008) examined the impact of interventions that focused on shared readings and found shared book reading “with young children has a significant, substantial, and positive impact both on young children’s oral language skills and on young children’s print knowledge” (p. 155). Shared storybook reading also contributes to a child’s success in learning to read and write (Puranik, Lonigan, & Kim, 2011). Through the evidence-based intervention of shared storybook reading, children are exposed to skills vital for social, language, and cognitive development (e.g., joint attention, phonemic awareness, written language, oral language, and complex communication designs; Bus, van IJzendoorn, & Pellegrini, 1995; Justice & Ezell, 2002; Lane & Wright, 2007). Children who partake in shared storybook reading receive opportunities to share a common experience with another individual, develop new concepts, increase vocabulary, develop listening comprehension skills, and engage in conversations about the text through question and answer sessions. Embedding such emergent literacy skills into everyday interactions is essential for later academic success (Hay & Fielding-Barnsley, 2007).

Shared Storybook Reading With Children With Autism

Positive results for children with ASD in the areas of language and communication skills have been shown through the use of storybook reading (e.g., Bellon et al., 2000;
Koppenhaver, Erickson, & Skotko, 2001; Vogler-Elias, 2009). Shared storybook reading promotes the growth of language and social participation, two core deficits for children with ASD, and with a few strategies, caregivers can implement this intervention at home (Koppenhaver & Erickson, 2003). Shared storybook reading is a natural activity in which a caregiver and child communicate with one another, share joint attention, and build critical emergent literacy skills (Stanton-Chapman & Brown, 2014). Although Pamela is aware that reading to her child is an important literacy experience, she is discouraged with the lack of reciprocal interaction from Connor and is not sure that her reading is effective. After Pamela talks with Kim, she understands that shared storybook reading can be a successful literacy experience by adding a few simple reading strategies while reading to him.

**What Caregivers Can Do to Increase Interactions During Storybook Time**

The following strategies can be implemented to enhance interactions between a caregiver and a child on the spectrum during story time. All strategies are evidence-based and, if put into practice, can lay the groundwork for important emergent literacy skills. Figure 1 provides a brief overview of the strategies.

### Picking Interest Boosting Storybooks

- Using the checklist in Table 2, select books pertaining to the child’s restricted interest.

### Setting the Environment

- Select a consistent time and place to read with your child.
- Position yourself so that your child can see your face and the book.

### Attention-getters

- A verbal or nonverbal prompt to refocus attention to the book.
- An example would be tapping on the picture of the dog and say, “Look, dog.”

### Questioning

- Incorporate a variety of the 5 types of questions (label, choice question, fill-in-the-blank, request action, and open-ended) throughout the story time.

### Wait time

- After asking a question have a brief 1.5 second pause accompanied by an expectant look. Wait time allows the child to process the question, thus increases the opportunity to communicate with their caregiver.

### Model Response

- If the child does not respond to the question within 3.5 seconds, model the correct answer.

### Feedback

- Feedback is any comment serving to acknowledge, extend, expand, restate or clarify the response after the child answers the question an adult has asked.
- Allows you to provided positive feedback for an incorrect answer that is encouraging, builds self-esteem, and promotes caregiver-child relationship.

**Figure 1**
Overview of strategies that caregivers can implement to increase interaction during shared storybook reading
with ASD through storybooks pertaining specifically to their child’s restricted interest. Research suggests exposing children to books focused on the child’s specific interest is a critical part of the child’s success (Ortiz, Stowe, & Arnold, 2001). Merging the evidence-based practice of shared storybook reading with the restricted interest of a child with ASD can motivate the child to engage in the storybook, resulting in increased language acquisition and emergent literacy skills.

Based on Lane and Wright (2007) and Ortiz et al. (2000), the following criteria are important to consider when selecting a book. Selected books (a) are based on the particular interest of the child, (b) have colorful illustrations, (c) are age appropriate, and (d) are well written, with an engaging story. When previewing books for selection, caregivers can begin to think about possible questions to ask when reading. Table 2 provides a checklist that caregivers can use to help choose appropriate storybooks.

### Example of picking interest-boosting storybooks

Due to Connor’s interest in space, Kim suggests that Pamela visit her local library to check out children’s books on the subject of space and space-related objects. Using the Table 2 checklist, Pamela found numerous interest-boosting books for Connor. Examples of books based on children’s interest can be found in Table 3.

### Setting the Environment

Children with ASD are most successful and comfortable in a routine and structured environment (Schmit, Alper, Raschke, & Ryndak, 2000). To maximize the effectiveness of reading aloud, the caregiver should pick a dependable time and a relatively quiet area to read to his or her child.

#### Example of setting the environment

Kim suggests that Pamela pick a comfortable place and a consistent time when she is able to read to Connor without many distractions. Pamela decides to read to Connor before his bedtime and picks his bed as the place to read the space stories from the library. A story before bed is a great addition to Connor’s nighttime routine. Reading aloud can have a relaxing effect and is a

### Table 2

<table>
<thead>
<tr>
<th>Checklist for Selecting Storybooks</th>
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<tbody>
<tr>
<td>☑️ Storybook is based on the child’s interest, providing the child more opportunities to actively engage in the book.</td>
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<tr>
<td>☑️ Storybook is bright and colorful. Not too busy and overly detailed.</td>
</tr>
<tr>
<td>☑️ Storybook is age appropriate, suited for the child’s age. Toddlers might like books with things to touch, rhyme, and repetition. Older children might enjoy alphabet books.</td>
</tr>
<tr>
<td>☑️ Storybook is engaging, has a well-written plot and interesting characters, or is a subject matter of interest to the child.</td>
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great platform to share meaningful interactions between the caregiver and the child.

**Attention-Getters**

New vocabulary is often learned in situations when the caregiver and the child share joint attention on the same object (Strouse, O’Doherty, & Troseth, 2013). Using attention-getting prompts can help a child with ASD focus on the selected storybook and work on important emergent literacy skills. Attention-getting prompts can be any verbal or nonverbal initiation to refocus attention to the book (e.g., focusing in on pictures, events, attributes, or text features). The caregiver’s attention-getting prompt can include a word or a combination of words (e.g., “look,” “see the _____”) that helps the child focus or refocus on the topic or picture. Caregivers can also tap on a specific area of a book that is of interest to the child. A combination of the verbal and nonverbal attention-getters can also be used to grasp the child’s interest (e.g., while tapping on the picture of the cow say, “look, cow”; Crowe, Norris, & Hoffman, 2004).

**Example of attention-getters**

With Connor almost ready for bed, Pamela picks the book *Planets: A Solar System Book* by Ellen Hasbrouck and Scott McDougall. She picks this book because of Connor’s intense interest on space and planets. Remembering the attention-getting strategies that she and Kim discussed, Pamela positions herself so that Connor can see her face and the book. This is an important position as Connor can now see Pamela’s facial features as well as the book. When Pamela uses exaggerated facial features and face-to-face contact while reading, it helps Connor gain important insight into early social skills (Garfinkle & Schwartz, 2002). Pamela taps on the front cover and says, “Look, the sun,” to get Connor’s attention and simultaneously work on Connor’s oral language. Connor looks at the picture of the sun and then looks at

**Table 3**

<table>
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<td></td>
<td><em>Papa, Please Get the Moon for Me</em>, by Eric Carle (1991)</td>
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<td></td>
<td><em>Roaring Rockets: Amazing Machines</em>, by Tony Mitton and Ant Parket (2001)</td>
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<tr>
<td></td>
<td><em>Zoom Into Space With the Shiny Red Rocket</em>, by Tick Tock Books (2009)</td>
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<td></td>
<td><em>Freight Train</em>, by Donald Crews (1993)</td>
</tr>
<tr>
<td>Interest in animals</td>
<td><em>From Head to Toe</em>, by Eric Carle (2007)</td>
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<td></td>
<td><em>Hello Animals</em>, by Smriti Prasadam (2010)</td>
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**Table 3**

Examples of Appropriate Books Based on Child’s Interest

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Pamela. Pamela, knowing she has his attention, turns the page and begins to read.

**Questioning**

Caregivers can use a variety of questions while reading to their child to keep their child engaged through the storybook reading time (Strouse et al., 2013). Questioning builds on what the child already knows and is also a way to increase new vocabulary and information on unfamiliar subject areas (Lane & Wright, 2007). Table 4 provides five types of questions that caregivers can incorporate into their reading routine (Crowe et al., 2004). When a caregiver incorporates all five question stems into the shared reading time, he or she has the potential to support the child’s oral language, print awareness, and communication skills. The five question stems and examples are outlined in Table 4.

**Example of questioning**

Pamela is reading Roaring Rockets: Amazing Machines by Tony Mitton and Ant Parket. She turns the page to a red rocket.
Landing on the moon. She asks Connor a label question, “Show me the red rocket.” Connor points to the red rocket and Pamela says, “Great job, Connor. That is a shiny red rocket.” Then she uses a choice question, “Is the rocket landing on the sun or the moon?” Connor replies, “mmmmmm.” Pamela smiles. Not only is she happy that she is interacting with Connor, but she now understands that this interaction is working on Connor’s phonological awareness. Pamela then expands on Connor’s response, “You’re right, the rocket is landing on the moon.”

Caregivers do not have to ask the five types of questions in any particular order. They are displayed in Table 4 from questions that elicit the least amount of verbal response to those requiring the most. It is suggested that caregivers use a range of different questions. Additional prompting may be needed depending on the child’s verbal ability. For example, caregivers of children who are nonverbal could integrate visual supports (i.e., board book albums, Picture Exchange Communication System [PECS], objects relating to the book) while reading. Table 5 provides some helpful hints for caregivers to think about when reading to their child.

**Wait Time**

Caregivers use questions throughout the day to communicate with their child. Often, caregivers wait less than 1 second for a child to respond before they provide the answer or ask another question (Rowe, 1986). It is important to

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**Table 5**

<table>
<thead>
<tr>
<th>Helpful Hints!</th>
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<tbody>
<tr>
<td>Preview</td>
</tr>
<tr>
<td>Positioning</td>
</tr>
<tr>
<td>Use body language and gestures</td>
</tr>
<tr>
<td>Ask lots of questions</td>
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<tr>
<td>Use adjectives</td>
</tr>
<tr>
<td>Reread</td>
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<tr>
<td>Introduce new vocabulary</td>
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*Note. ASD = autism spectrum disorder.*
give a child time to process the question and respond (Lane & Wright, 2007). Using a brief 3- to 5-s pause, accompanied by an expectant look, is an easy way to increase the number of opportunities a child has to communicate with his or her caregivers (Crowe et al., 2004). Adding exaggerated gestures and/or body language also helps indicate to the child that a response is expected (Hughes, Fredrick, & Keel, 2002).

**An example of wait time**

As Pamela continues to read to Connor, she asks him to point to the red planet, Mercury. Using the wait time strategy, she waits 3 s and gives Connor an expectant look. After the 3 s, he points to Mercury, and Pamela praises him by saying, “Great job Connor. You pointed to the red planet, Mercury.”

**Model Response**

Some children may not respond to a caregiver’s questioning, even after waiting 3 to 5 s. Do not panic! Use this as an opportunity to model your thought process and introduce rich vocabulary. Modeling provides the child examples of how to respond (Crowe et al., 2004). Using this strategy provides guidance and support to the child, allowing him or her to hear appropriate use of syntax (the proper way to form phrases and sentences) and grammar (Lane & Wright, 2007).

**Example of model response**

Pamela is reading, *Zoom Into Space with the Shiny Red Rocket* by Ticktock Books. She asks Connor a request for action question, “Where is the rocket flying?” She waits 5 s and then taps on the picture of the moon. Even with the additional tapping prompt, Connor does not answer. Pamela then models the desired response, “The red rocket is flying to the moon. I can tell the rocket is approaching the moon because the front of the rocket is pointing towards the moon.” Shared storybook reading allows Pamela not only to take the opportunity to model the correct answer but also to use an unfamiliar vocabulary such as “approaching” in her response. Coyne, Simmons, Kame’enui, and Stoolmiller (2004) also report that children often learn new vocabulary through listening to storybooks. When introducing new vocabulary, create a kid friendly definition and link the new word to prior experience and more familiar words. Pamela continues, “The word approaching means moving closer. What other objects are approaching the moon?” The word “approaching” is a word Connor may not have been exposed to through typical interactions in his home and school environments. Pamela introduces a novel word into Connor’s vocabulary through the context of a subject that interests him. As a result, the probability of Connor using that word in the future is higher (Ortiz et al., 2001).

**Feedback**

Feedback is another important strategy that should be used when reading to a child with ASD. Feedback is any comment serving to acknowledge, extend, restate, or clarify the response after the child answers the question. Using feedback provides an opportunity for the caregiver and the child to discuss material presented in the book and provides the child with...
new information (Lane & Wright, 2007). Feedback can clarify the accuracy of the child’s previous utterance or response (Crowe et al., 2004). Furthermore, this strategy can be used to reteach or provide a language model if the child answers incorrectly.

Examples of feedback

Pamela continues to read, *Zoom Into Space with the Shiny Red Rocket*. This touch and feel book gives Pamela numerous opportunities to expand and use a variety of rich vocabulary. She asks Connor the open-ended question, “What is your favorite space object on this page?” Connor points and replies, “the moon.” Pamela gives him positive feedback by expanding on Connor’s answer: “Your favorite space object is the squishy yellow moon. My favorite space object is the sparkly red rocket. It’s my favorite object because rockets can move very quickly in outer space.” Pamela does a great job of restating Connor’s response while adding adjectives and other words to reinforce Connor’s prior knowledge, vocabulary, and oral language.

Turning the page, Pamela points to a picture of a planet and uses a choice question with Connor: “Is this a planet or a star?” Connor replies, “star.” Although his answer is incorrect, Pamela knows that simply telling Connor that he is wrong is not going to enhance the interaction or his emergent literacy skills. Therefore, Pamela uses the feedback strategy to provide Connor with the correct answer. She says, “That is a good try Connor, but I am pointing to the red planet.” Pamela takes Connor’s finger and guides him to feel the red planet, then shows him where the stars are located on the same page. Using the feedback strategy when an answer is incorrect allows Pamela to provide positive feedback that is encouraging, builds self-esteem, and promotes the caregiver–child relationship (Ball & Gettinger, 2009).

Conclusion

Reading to children with autism comes with a unique set of challenges. To state that a single strategy will alleviate these challenges would be overly simplistic. Research supports the impact that the strategies in Figure 1 have on increasing caregiver–child interactions. When caregivers use these strategies while reading, they provide rich opportunities for shared interactions, thus increasing their child’s exposure to important emergent literacy skills. Through the vignettes, we have seen Pamela increase the amount of quality interactions with Connor during their storybook time. Due to the rise in communication and engagement, Pamela is now reading more often with Connor, resulting in an increase of his exposure to critical emergent literacy skills.

Author’s Note

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References


