

Addressing Sleep Difficulties in Children with Autism Spectrum Disorder (ASD): The Role of Occupational Therapy

Kaylee Nichols, OTD-S | Pam Stephenson OTD, OTR/L, BCP, FAOTA
Murphy Deming College of Health Sciences

Introduction

- Approximately 50-80% of children with ASD have one or more chronic sleep problems. Sleep problems are more than twice as common in young children with ASD aged 2-5 years old as compared to both the general population and those with just developmental disabilities (Reynolds et al., 2019).
- Sleep difficulties in children with ASD can be linked to increases in daytime behavioral problems including irritability, hyperactivity, social withdrawal and stereotypical behaviors (Johnson et al., 2018).
- Support for parent education and behavioral interventions for children with sleep problems and ASD is documented throughout the literature to support sleep participation and parenting sense of competence (Hyman et al., 2020; Malow et al., 2014; Devnani et al., 2015).
- OTs, through use of holistic approaches, are well suited to provide education on environmental modifications, routines, sensory calming strategies, and behavioral strategies to support sleep preparation and participation among children with ASD (Wooster et al., 2015).

Objectives

- This project aims to explore the relationship between sleep difficulties and children with ASD, to investigate evidence-based strategies to support the occupation of sleep, and to develop a sleep guide to be distributed to parents of children with ASD and therapy providers.

Methods

- A literature review was conducted to investigate common sleeping challenges faced by children with ASD as well as evidence-based treatment approaches that OTs can utilize to promote sleep preparation and participation for children with ASD.
- A parent-friendly infographic containing evidence-based treatments for addressing sleep difficulties in young children with ASD was created to provide parents with helpful tips and examples to help establish positive sleep patterns and routines.
- See middle section for specific examples.

Bedtime Routine & Schedule

It's all about the Routine!

One of the best ways to support your child's sleep is establishing and maintaining a positive bedtime routine. It can take some time to establish a routine that works best for your child and family. Keep experimenting with ideas and strategies to find ones that work best. Once you figure out a plan that works for you and your child, stick with it! Whatever routine you decide, try to be consistent!

- It is recommended that a bedtime routine be 15 to 30 minutes in length and no longer than an hour.
- Try to complete the same set of activities at the same time each night, even on the weekends if possible.

- Consider "wind down" activities that are not highly stimulating before bed.
- When getting ready for bed, focus on quiet, relaxing, or calming activities (i.e., reading, listening to soothing music, warm bath, massage, prayers).
- Avoid bright screens (TV, computer, iPad, phone) and aim to have your child relax in a dim, quiet space before bed.

Helpful Tips & Strategies for Creating a Bedtime Routine

1. Create a Checklist

Tip: Checklist can be laminated or written on mini dry erase board to carry with child and check off completed steps throughout the bedtime routine each night.

<input type="checkbox"/>	Brush teeth
<input type="checkbox"/>	Go to Bathroom
<input type="checkbox"/>	Put on Pajamas
<input type="checkbox"/>	Get into Bed
<input type="checkbox"/>	Read a story
<input type="checkbox"/>	Good night hugs
<input type="checkbox"/>	Turn off lights
<input type="checkbox"/>	Go to sleep

2. Use a Visual Schedule

Tip: These are a great aid and visual reinforcement to help your child understand expectations and sequences for a bedtime routine. You can laminate these and involve your child in checking off each step. Add Velcro or magnets to the back of each card to attach to a poster board, binder, or folder.



3. Use a Timer

A timer or the playing of music can be used to cue your child that it is time to start the bedtime routine or that it is time to transition to the next activity.

Tip: Introduce the timer to the child before and explain its purpose. (e.g., "The timer will make a beeping sound. When you hear the beeping sound it is time to turn off the TV and come to the bathroom to brush your teeth.")

4. Object/Representational Schedules: Creation of an Object Board

Some children may not be able to use schedules with photos, icons, or words and may find it more helpful to use objects instead.

How do I use this method?

For example, a bedtime routine may consist of using the bathroom, taking a bath, brushing hair, getting a massage, and reading a story. You would place these objects in order of completion near the bedroom or bathroom. Encourage your child to grab the object before the start of the task to guide their actions and take it with them to the location where the activity occurs.

Tip: If your child has a comforting object they use at night (e.g., stuffed animal, special blanket, or pillow) then you can also add this to the object board to signal that it is time to get into bed.



Additional Considerations

- Consistent Daytime Habits and Routines:** The above strategies can also be applied to reinforce daytime routines and can help your child more easily transition to a bedtime routine.
- Screen time:** Try to limit screen time (video games, tv, computer) as much as possible during the day and turn off screens an hour before bedtime.
- Diet:** Avoid foods and drinks heavy in sugar or caffeine (chocolate, ice-cream, soda). Avoid eating right before bed.
- Physical Activity:** Provide time during the day for outdoor play and plenty of natural light. This can help establish healthy circadian rhythms. Schedule moderate to high levels of physical activity in the morning or afternoon.

Bedtime Fading

Putting your child to bed when they are not tired can increase the chances of bedtime challenges and difficulty falling asleep. **Bedtime fading** is a strategy that can be used to teach your child to fall asleep at a desired bedtime. It involves setting the bedtime at a time when your child usually falls asleep (or their natural time for sleep) and then gradually making the bedtime earlier (Richdale et al., 2005).

How Does Bedtime Fading Work?

Example

If you want your child to go to bed at 8:30 pm but they usually do not fall asleep until 10:00 pm, then 10:00 pm will be the temporary bedtime.

Night	Bedtime
Nights 1 & 2	10:00 pm
Nights 3 & 4	9:45 pm
Nights 5 & 6	9:30 pm
Nights 7 & 8	9:15 pm
Nights 9 & 10	9:00 pm
Nights 11 & 12	8:30 pm

Remember to try these strategies for a couple of nights or longer if needed. Take it slowly. Being consistent can help improve your child's sleep patterns!

- Determine your child's natural sleep time or when they usually fall asleep. This will be their temporary bedtime!

Tip: Keeping a sleep diary or log can help you keep track of your child's sleep patterns.

- For at least 2 days, treat this later bedtime (the natural bedtime) like the normal bedtime.

Continue to follow the bedtime routine and any activities typically done to calm or soothe your child (e.g., warm bath, reading, massage, songs) before bed.

- Next, you will gradually fade the bedtime to an earlier time, about 15 minutes earlier every few days until you reach the desired bedtime.

The Bedtime Pass

A **bedtime pass** is a great strategy to help your child learn to stay in bed. It is a pass that is given to your child that can act as a ticket to be traded for one free trip out of bed or one parent check in/visit after bedtime. If your child does not use the card during the night, then it can be exchanged for a reward or child's activity of choice the next day.

- Below is an example of a bedtime pass & sample explanation to go along with the pass. Note that this is just an example, and you can customize as needed to your child & unique family situation!

Sample Explanation:

Sleep is good for me. It helps me rest and have energy for the next day. My parents sleep and so must I. My parents want me to get a good night's sleep so I can feel calm.

This bedtime pass can help me. It is like a ticket. If I need to get out of bed, then I can use the bedtime pass. I can use the pass for a drink of water or a hug from my parents. I must give the pass to my parents if I use it. If I stay in bed all night, I get to keep the bedtime pass. It is a great thing if I can keep the bedtime pass! I want to try and stay in bed all night. In the morning, I can trade the bedtime pass for a snack, sticker, or more time on my tablet!

It is good to get a good night's sleep so I can do the things I want to do during the day!



My Bedtime Pass

- I can exchange for:
- 1 cup of water
 - 1 visit from parent
 - 1 nighttime hug

Positive Reinforcement

A visual schedule or checklist (as described earlier) tied with a reward system, such as a sticker chart, can help your child understand expectations and be rewarded for successfully completing or trying portions of the bedtime routine.

- Here is a sample reward chart.
- Offer rewards and lots of positive praise for desired behaviors



MY REWARD IS:

Conclusions

- Children with ASD may present with sleeping challenges, such as trouble staying or falling asleep, as a result of co-morbid conditions (i.e. epilepsy or gastrointestinal reflux) or multiple biological, environmental and psychosocial factors influencing sleep and sleep behaviors (Cohen et al., 2014).
- Often within the ASD population, sleep problems can be attributed to poor sleep hygiene, difficulty understanding expectations around sleep routines, and decreased daytime participation in physical activities (Ho et al., 2018; Hyman et al., 2020).
- Parent and caregiver education provided in easily accessible language with specific examples on how to put the information into practice can support improved sleep behaviors in children with ASD (Adkins et al., 2012).
- Sleep challenges should be addressed by an interprofessional team to address any medical concerns while also considering psychosocial factors and the family's unique dynamics and routines.

References can be obtained by scanning the QR code to the right.



Acknowledgements

The Blue Ridge Leadership Education in Neurodevelopmental Disabilities (Blue Ridge LEND) and this project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$2,242,875. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.