



Resource Article

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Engaging
Children with ASD
in Daily Routines

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Sleep is an important aspect of our daily functioning. We have all had days where our lack of sleep has impacted our behaviors throughout the day. For example, a poor night of sleep may lead to irritability or short-temperedness. As providers working with young children and families you have probably heard parents explain that the child is acting this way because they did not get enough sleep. Now imagine the child has a diagnosis of Autism Spectrum Disorder (ASD) and already struggles to control their behaviors throughout the day, do you think poor sleep would play a role in the child's behaviors? Now add the complexity of family demands and how parent stress might ensue in the context of child behavioral challenges?

The KIT article this month aims to explore the effects of poor sleep on disruptive behaviors in children with ASD. Johnson et al. (2018)

states that "Autism Spectrum Disorder (ASD) is characterized by social communication deficits, restrictive interests and repetitive behavior affecting 6.2-14.7 per 1000 children..." (p. 61). It is common that a child diagnosed with ASD will also "...have co-occurring problems such as tantrums, aggression, self-injury, hyperactivity, anxiety, depression, and sleep disturbance" (Johnson et al., 2018, p. 62). In fact, sleep disturbance problems "...such as bedtime resistance, sleep-onset association problems, delayed sleep onset, interrupted sleep, and decreased total sleep time have been reported in up to 80% of children with ASD" (Johnson et al., 2018, p. 62). In children developing typically, sleep disturbance problems normally dissipate over time with the worst being in preschool years, however, in children with ASD sleep disturbance is most common during the ages of six and nine.

Resource Article (continued)

This study aimed to extend the research information that correlates poor sleep with behavioral and emotional problems in children with ASD, examine the role of IQ in sleep disturbance, and examine whether parental stress is higher when the child with ASD has sleep disturbances. The study sample consisted of 177 healthy children ages 3-7 who had a diagnosis of ASD and a moderate or greater severity of disruptive behavior. It is important to note that this study was initiated prior to the DSM-V so the ASD diagnoses were based on the DSM-IV. Data was collected on the children's sleep problems, behaviors, and parenting stress levels by parent reported measures. The sample was then divided into "poor sleepers" and "good sleepers" for comparison (Johnson et al., 2018). The study concluded that there was no age difference between the good sleepers and poor sleepers. There was also no significant difference in the IQ level between the good sleepers and poor sleepers. However, Johnson et al. (2018) did discover that "...poor sleepers had significantly higher scores on the ABC Irritability, Hyperactivity, Stereotypy and Social Withdrawal subscales" (p. 63). Johnson et al. (2018) concluded that "[t]he largest differences in children with poor sleep were in irritability and

hyperactivity/ noncompliance, suggesting a possible connection between poor sleep and degradation in externalizing, daytime behaviors" (p. 63). Findings also suggested that children with ASD who are poor sleepers display more social disability. Along with the higher behavior problems in the poor sleep group, parenting stress was also higher. Johnson et al. (2018) suggested that "[t]his indicates that parents face a greater burden when a child with ASD has the combined clinical picture of disruptive behavior and poor sleep patterns" (p. 63).

As a result of this study Johnson et al. (2018) suggests that since it appears sleep problems in children with ASD do not decline as they do in children developing typically "...early treatment for sleep disturbances for young children with ASD may be warranted" (p. 63). The data also supports screening all children with ASD for sleep disturbances regardless of their IQ level or age. As early intervention providers working with families of young children with sleep challenges and ASD it is important to be aware of the challenges and interventions that can support families.

Johnson, C., Smith, T., DeMand, A., Lecavalier, L., Evans, V., Gurka, M., Swiezy, N., Bearss, K. & Scahill, L. (2018). Exploring sleep quality of young children with autism spectrum disorder and disruptive behaviors. *Sleep Medicine*, 44, 61-66. doi:10.1016/

What do the data say?



What are age related sleep trends and are there cross-cultural differences?

Sleep is a vital part of our overall health and “...evidence indicates that sleep is most clearly associated with children’s physical, mental, and neurobehavioral development as well as other family members’ well-being” (Lin Q-M et al., 2019, p. 1). Lin Q-M et al. (2019) performed a systematic review and meta-analysis to describe age-related sleep trends and examine cross-cultural disparities between predominantly-Asian (PA) and predominantly-Caucasian (PC) regions during the first three years of life. The systematic review included 102 observational studies from 26 different countries.

The total sleep duration average of children in the first three years was 12.89 hours, 9.74 hours for nighttime sleep duration, and 3.16 hours for daytime sleep duration. In terms of age related trends for total sleep duration, a rapid decline was identified over the first three months of 27 minutes per month, followed by a decrease of one minute per month from three months to three years (Lin Q-M et al., 2019). Night waking also declined rapidly in the first three months and continued decreasing slightly in the following three years. On average, children 4-36 months went to bed at 20:43 and woke up at 7:12. The analysis discovered that “...bedtime gradually delayed 63 min from 4 to 12 months then advanced 40 min from 12-36 months, yet wake time did not change significantly” (Lin Q-M et al., 2019, p. 7).

The analysis revealed that toddlers in PA regions had shorter total sleep duration and nighttime sleep duration, while newborns in the same region had longer daytime sleep duration when compared to PCs. PA regions also demonstrated later bedtimes for all age groups in the first three years and had more night wakings for all age groups.

Overall, both regions had total sleep durations that

fell within the appropriate range set by the National Sleep Foundation (NSF). The NSF categorizes “good” sleep as one night waking or less per night and four or more as “poor” sleep. Lin Q-M et al. (2019) noted that night wakings in PA children were beyond the NSF recommendation of “good” sleep. Lin Q-M et al. (2019) noted, “[s]everal factors such as inter-ethnic differences, interethnic variation, parenting practices, as well as other socio-anthropological factors may contribute to such cultural differences including the development trends of the sleep parameters in early life, in which sleep-settling and feeding behaviors may be the most important two cultural factors” (p. 9). “[P]arental sleep settling behaviors, such as parental nighttime involvement and nightly bedtime routine, have been considered to be the most immediate and direct influences on child sleep” (Lin Q-M et al., 2019, p. 9-10). Differences in parental involvement with feeding, rocking, holding, and/or sleeping with the child at bedtime can vary greatly within different cultures. Lin Q-M et al. (2019) stated that Mindell et al. indicated that “...children from PA regions were much more likely to be engaged with their parents, to partake in maladaptive activities (e.g., media-related activities), and were less likely to have a consistent bedtime routine than those from PC regions” (p. 10). Lin Q-M et al. (2019) discovered that PA children were more likely to have televisions in their room as a sleep aid and part of the bedtime routine. These factors could predict adverse sleep outcomes like later bedtimes, increased night wakes, and shorter night sleep durations.

The findings above can help “...inform the development and implementation of sleep recommendations in this age group for different cultural backgrounds, and are especially useful for clinicians and health professionals to understand that one size does not fit all” (Lin Q-M et al., 2019, p. 11). This information helps highlight the varied behaviors in different cultures and is useful for providers as they support families.



Consultation Corner

For the next three months we are honored to have Dr. Hedda Meadan-Kaplansky as the KIT Consultation Corner expert. Dr. Meadan will be addressing ways to help families engage their children with autism spectrum disorder (ASD) in daily routines. The three routines she will cover are participating in bedtime and sleeping, running errands, and engaging in play times.



Dr. Meadan is a professor at the Department of Special Education at the University of Illinois at Urbana-Champaign, a Goldstick Family Scholar, and a Board Certified Behavior Analyst.

Dr. Meadan's areas of interest include social-communication skills and challenging behavior of young children with autism and other developmental disabilities and intervention methods to enhance these spheres of functioning. Dr. Meadan and her colleagues have developed a parent-implemented intervention program designed to improve the social-communication skills of young children with disabilities who have very limited expressive language. Two of her current research projects focus on the use of technology to support service providers/

therapists and families of children with disabilities. In the first project telehealth is used to coach service providers/therapists and family members from distance on evidence-based strategies to promote children social-communication skills. The purpose of the second project is to develop an app to help identify the function of and address challenging behavior of children with and without disabilities.

Dr. Meadan is also engaging in a research study aimed at understanding the experiences and needs of military families with young children with autism. Additionally, Dr. Meadan was the 2019 Military Family Learning Network (MFLN) Early Intervention webinar presenter on a series titled "[Sunrise to Sunset: Supporting Children with Autism Through Their Day.](#)" This series included the following four webinars, which are available for viewing.

- [What Do We Know: Autism Screening, Diagnosis, and Supporting Young Children and Families](#)
- [Yuck! I Don't Eat That! Nutrition and Selective Eating in Young Children with Autism](#)
- [Stepping Out: Family Outings with Young Children with Autism](#)
- [Welcome to the Group: Inclusion for Young Children with Autism](#)

Consultation Corner (continued)

ASD and Sleep Difficulties

Autism Spectrum Disorder (ASD) impacts more than 70 million individuals around the world and the current data from the [Centers for Disease Control and Prevention](#) (CDC) show that 1 in every 59 children in the US have autism. Boys are diagnosed with autism four times more than girls and autism occurs in all racial, ethnic, and socioeconomic groups.

Many young children with ASD have difficulties with sleep and these difficulties could negatively impact the children and their families. Families could use different strategies and practices to prevent and address sleep difficulties. However, it is important to remember that ASD is a spectrum and as [Dr. Stephen Shore](#) said: "If you have met one person with autism, you have met one person with autism." When working with families of children with ASD, providers should first get to know the child and their family, their routines, lifestyle, and values. Based on the family's needs and priorities different strategies and practices can be recommended.

Sleep difficulties and problems include trouble falling asleep, staying asleep, waking up multiple times during the night, or waking up very early in the morning. Researchers report that more than 80% of children with ASD have sleep difficulties that could have negative impacts on the child, their parents, and their siblings. Although this is a common problem, there are no clear answers to why children with ASD have sleep problems.

When a child has a sleep problem it is recommended to first visit a physician to rule out any medical issues and discuss treatment options. After consulting with a physician, parents can make changes in their routines and practices to prevent and address sleep problems. Changing behavior could take time and require *consistency* and *collaboration* among family members and providers. The [Autism Speaks](#) developed a [Parent Guide](#) with

strategies to improve sleep of children with ASD. Service providers can discuss with parents and caregivers the following recommendations to address sleep problems. The recommendations included here are based on principles of applied behavior analysis.

Setting: *Create a quiet, safe, and comfortable setting for sleeping. Consider-*

- The location or setting
- The type of bedding
- Lighting
- Temperature
- Noise level
- Favorite items

Routine: *Establish a bedtime routine that is consistent and predictable. Consider-*

- Timing- when to start the routine and how long it should take.
- Screen time- limit or eliminate screen time before bedtime.
- Physical activity- include physical activity during the day so that the child can get some energy out.
- Food and drink items- limit or eliminate caffeinated food and drinks
- Activities prior to the routine- relaxing activities, such as reading or taking a bath.
- Visual supports- use visual schedule and reminders. For example, parents can use a timer to count down the time to go to bed.

Reinforce: *Give lots of praise and positive reinforcement for appropriate behavior of bedtime routine.*

Celebrate: *Celebrate small and big changes.*

Sleeping difficulties could have negative impact on the child and their family. Collaboration between family members and professionals and using consistent routines and reinforcement of appropriate behavior could lead to positive outcomes for everyone involved.



On the WWW

This month's web resource is an online guidebook titled "Life Journey through Autism: A Guide for Military Families." It was developed by a cooperative of the [Organization for Autism Research \(OAR\)](#) and [Southwest Autism Research and Resource Center \(SARRC\)](#).

The guidebook answers questions about autism, including characteristics, diagnosis, and prevalence. It provides information about

diagnosis, treatment, services, DoD related health care resources (e.g., TRICARE, EFMP, ECHO), as well as other Federal, military and autism related resources.

This hearty, nearly 150 page, guidebook is available online at the following URL and is a useful resource for military families and supporting providers. <https://militaryfamilieslearningnetwork.org/wp-content/uploads/2019/04/>



Continuing Education for KIT Readers

The Comprehensive System of Personnel Development (CSPD) is offering a continuing education opportunity for KIT readers.

In line with the focus on **Engaging Children with ASD in Daily Routines** readers are invited to receive continuing education contact hours for reading the monthly KIT publications (December 2019 - February 2020) and completing a multiple-choice exam about the content covered in these KITs.

KIT readers will receive the exam for this series in February 2020. There is no need to register for the CEUs. Rather, if you are interested, complete the exam online at www.edis.army.mil

Upon successful completion of the exam, you will receive a certificate of non-discipline specific continuing education contact hours.

KIT Newsletters
are online at
www.edis.army.mil

Thank you for your continued interest in the KIT.

