# Assessing and Treating Sleep Difficulties in Anxious Children and Adolescents

Anna Swan and Johanna Carpenter

Ten percent of children experience anxiety disorders, and the majority of them also have sleep-related problems. A multi-step process is recommended to help children and adolescents with anxiety achieve independent and sufficient sleep, which includes 1) establishing good sleep hygiene to set the stage for quality sleep, 2) using cognitive behavioral therapy with exposures to help children and adolescents learn to manage anxiety that interferes with sleep, 3) using behavioral sleep interventions to address poor sleep onset associations and other sleep specific concerns, and 4) tailoring interventions throughout treatment to match caregiver and child needs. Parent guidance and training is essential to help change maladaptive sleeping patterns.

Two parents come into your office, eyes red from lack of sleep, 7-year-old child in tow. "Our child Sophie refuses to sleep in her room," they say. "Every night we tuck her in, and five minutes later she's out of bed. She asks for water, or the bathroom, or an extra hug. She says she hears a scary sound, and she's afraid. She's constantly worrying, and the only way she falls asleep is when one of us lies down next to her. And that's not all. She wakes up repeatedly and comes into our room. We try to take her back to her room, but she keeps waking up until we finally give in. I know it's bad, but eventually we just have to let her sleep in our bed. Come morning we're all exhausted. Even teachers are concerned that she seems tired during the day and isn't learning. The two of us haven't had a good night's rest in years. What do we do?"

*Anna Swan, PhD, is currently on fellowship at the NYU Child Study Center, Anxiety and Mood Disorders Service. Her clinical and research interests center on the assessment and treatment of youth anxiety disorders with a focus on improving functional outcomes. She completed her PhD at Temple University and internship at Nemours/Alfred I. duPont Hospital for Children.*

Anxiety disorders affect approximately 10% of children and adolescents (Costello, Egger, & Angold, 2005), and are associated with impairment in social, academic, and family functioning (Swan & Kendall, 2016). Reports suggest that 80–90% of youth with an anxiety disorder experience one or more sleep-related problems (Chase & Pincus, 2011). Increased anxiety symptomatology has been linked to more problematic sleep (Chase & Pincus, 2011), and increased sleep concerns are associated with heightened anxiety severity (Caporino et al., 2015). This negative cycle of elevated anxiety exacerbating sleep difficulties and vice versa can be difficult to break. Sleep difficulties are linked to numerous adverse health outcomes, including increased risk of accidents and injuries, obesity, and impaired immune system functioning. Sleep concerns are also linked to lower cognitive performance, worse academic achievement, increased negative affect, and decreased impulse-control (Paruthi et al., 2016). This paper highlights common sleep problems and identifies evidence-based interventions to address sleep concerns for children and adolescents with clinically elevated anxiety.

**Laying the Foundation: Sleep Hygiene Basics**

Sleep hygiene basics are foundational when addressing sleep concerns for children and adolescents with elevated anxiety. This will be your first area of work with patients. Specifically, establishing a consistent night-time routine can help establish cues that prepare the body for sleep, and is particularly important in early childhood (Mindell, Telofski, Wiegand, & Kurtz, 2009). It is typically recommended that children engage in three to five activities that move progressively closer to the bedroom and take no more than 30 minutes in total to complete. An example would be to first bathe, then brush teeth, put on PJs, read a book, and

*Johanna Carpenter, PhD, is a pediatric psychologist and director of internship training at Nemours/Alfred I. duPont Hospital for Children, where one of her areas of specialty is behavioral sleep medicine. She holds an academic appointment as Assistant Professor of Pediatrics at Sidney Kimmel Medical College of Thomas Jefferson University.*

finally get into bed. In addition to facilitating sleep onset, a structured nighttime routine may also 1) provide comfort and reduce anxiety for children who experience nighttime fears, and 2) facilitate problem-solving around anxiety-producing concerns (e.g., placing out clothes the night before to reduce morning worries about what to wear). Other strategies to reduce nighttime anxiety are discussed later. For young children who have difficulty with organization or motivation to complete the routine, a visual schedule with pictures of each bedtime task can be helpful. Children can earn a check for completing each step, which can later be redeemed for a reward (e.g., having a parent read a preferred bed-time story; earning a "special breakfast" in the morning).

One of the most common culprits behind sleep problems in youth is—you guessed it—screen time. In a systematic review of 67 studies, screen time was correlated with delayed sleep onset and shortened sleep duration (Hale & Guan, 2015). Studies with adolescent samples have found light emitted from personal screen use (e.g., phone, tablet) to suppress melatonin production, a hormone that facilitates sleep onset (Figueiro & Overington, 2016); thus, you will want to recommend that youth turn off all screens at least one hour prior to bedtime. Ideally, devices would also remain in a caregiver's room overnight to charge. Some youth "sneak" screen time without their caregivers' knowledge. Storing electronic devices outside of the child's room and/or having parent-controlled passwords on devices to prohibit youth access without parental permission may decrease this behavior.

Some children and adolescents with a history of watching television to fall asleep have developed a sleep association, and report sleep onset difficulties when the television is turned off; however, research suggests that having the television on actually contributes to delayed sleep onset and increased night wakings (Hale & Guan, 2015). Although it may be difficult to retrain the body to fall asleep without television, short-term efforts are likely to contribute to long-term sleep benefits.

Daily exercise during the daylight hours has also been demonstrated to improve sleep (Brand et al., 2010); however, exercising right before bed can interfere. You should recommend physical activity during the day, but not immediately prior to bed.

For children with sleep difficulties, creating the ideal sleep environment is particularly beneficial. Three environmental factors that facilitate sleep are darkness, quiet, and bedroom temperatures below 75 degrees Fahrenheit (Meltzer & Crabtree, 2015). For children who are afraid of the dark, parents may keep a lamp with a red light bulb turned on, rather than a regular light or nightlight. Research suggests that red light has the lowest impact on melatonin suppression—and therefore on sleep—compared to other color wavelengths, especially blue light (Figueiro, 2016). Blackout curtains can help maintain a dark room, particularly when days become longer in the summer. In a pinch (or when on vacation), black trash bags are an effective substitute when taped to the window. If household noise is a concern, a motorized white noise machine (or fan) that stays on for the entire night can muffle sounds that would otherwise wake children in the middle of the night, or delay sleep onset. Alternatively, foam earplugs are often well tolerated.

By working with parents to set the stage for sleep with a consistent bedtime routine and sleep-conducive environment, many sleep difficulties abate.

**Building the Framework: Assessing and Addressing Anxiety**

Clinically elevated anxiety can negatively affect sleep in a number of ways. Some of these are summarized in Table 1. Treatment planning requires a comprehensive assessment of the exact nature of the sleep difficulties, which includes how the anxiety presents and how sleep is impacted. Several scales exist for use in sleep and anxiety assessment.

**Anxiety Assessment Tools.** The Anxiety Disorders Interview Schedule for Children for DSM-IV (Child and Parent Versions; Silverman & Albano, 1996) is a semi-structured clinical interview that assesses anxiety and related concerns, and is considered the gold-standard diagnostic tool for anxiety disorder assessment. Diagnosticians assign a clinical severity rating (CSR) ranging 0 to 8 for each anxiety disorder assessed; a CSR > 4 indicates that the youth meets full diagnostic criteria for an anxiety disorder, and would likely benefit from participating in an empirically supported treatment for anxiety. Parent and youth self-report measures to assess anxiety symptomatology for school-aged youth include the Multidimensional Anxiety Scale for Children (MASC; March, 1997; March, Parker, Sullivan, Stallings, & Conners, 1997) and the Spence Children's Anxiety Scale (SCAS; Spence, 1998; Spence, Barrett, & Turner, 2003). The Spence Preschool Anxiety Scale (SPAI; Spence & Rapee, 1999) is a standardized parent report form that assesses anxiety symptoms in young children ages 3–6. Norms are available for the MASC, SCAS, and SPAI to help determine if youth are reporting very elevated overall anxiety symptoms (T-Score > 70),

**Table 1**

| Anxiety Disorder | Common Sleep Concerns | Intervention Strategy |
|---|---|---|
| Separation Anxiety Disorder<br>• Characterized by fear of harm befalling oneself or caregivers when separated, and associated impairment. | • Fear of falling asleep without caregivers' presence.<br>• Calling for caregivers, or going into caregivers' room in the middle of the night. | • Gradually moving parents out of the room over the course of many nights.<br>• Use of a bedtime pass system |
| Generalized Anxiety Disorder<br>• Characterized by excessive and uncontrollable daily worries with associated impairment. | • Worries about being harmed at night, and/or in the dark (e.g., by burglars).<br>• Worries about past or future events. | • Having a "worry time" in the morning or middle of the day.<br>• Use of progressive muscle relaxation prior to sleep.<br>• Exposures centered on being alone in the dark, or at night.<br>• Use of visual imagery when falling asleep (e.g., imagining oneself swimming or floating through space). |
| Social Anxiety Disorder<br>• Characterized by fear of negative evaluation in social situations with associated impairment. | • Ruminating about past or future social events when trying the fall asleep. | • Exposures to address social fears.<br>• Use of visual imagery or progressive muscle relaxation to help with sleep onset. |
| Specific Phobia of the Dark<br>• Characterized by heightened fear and avoidance of the dark with associated impairment. | • Fear of being alone in the dark.<br>• Wanting to be near a caregiver, sibling, or pet when falling asleep at night.<br>• Wanting a nightlight on. | • Exposures centered on being alone in the dark for increasing spans of time (e.g., "Flashlight Scavenger Hunt"). |

as well anxiety disorder specific symptoms (e.g., social anxiety, separation anxiety) compared to same-aged peers.

**Sleep Assessment Tools.** Given that the majority of children with anxiety also experience sleep-related problems, sleep-specific assessment is recommended at intake. The sleep diary is a self-report form that assesses sleep patterns, including bedtime, sleep latency, night wakings, and sleep efficiency (the ratio of total time spent in bed to time spent sleeping), and has been demonstrated to be a reliable estimate of sleep patterns (Buysse, Ancoli-Israel, Edinger, Lichstein, & Morin, 2006). Sleep diaries can be used to estimate total amount of sleep per day, and to determine if insufficient sleep, delayed sleep onset, and/or frequent night wakings are of concern. Other standardized measures include 1) the Children's Sleep Habit Questionnaire (CSHQ; Owens, Spirito, & McGuinn, 2000), a parent report measure that assesses sleep behaviors within the past week, including bedtime resistance, night wakings, parasomnias, sleepiness, sleep onset delay, sleep anxiety, and sleep disordered breathing, and 2) the Child Sleep Hygiene Scale (CSHS; Harsh, Easley, & LeBourgeois, 2002), a parent report measure that assesses sleep hygiene habits.

**Evidence-Based Treatment.** For children and adolescents with clinically interfering anxiety who also experience sleep-related problems, participating in cognitive behavioral therapy may help them 1) reduce overall anxiety, and 2) improve sleep difficulties secondary to anxiety (e.g., experiencing less nighttime worry that contributes to difficulty falling asleep). Cognitive behavioral therapy (CBT) is an empirically supported treatment for youth anxiety disorders (Hollon & Beck, 2013), and research suggests

that youth who respond to CBT demonstrate improvements in sleep-related problems (Peterman et al., 2016). The Child and Adolescent Multimodal Study (CAMS) is the largest randomized control trial to examine the relative efficacy of CBT, medication (sertraline: SRT, a selective serotonin reuptake inhibitor), combined treatment (COMB: CBT + SRT), and pill placebo in treating youth anxiety. Reported findings indicate that 80.7% of participants in the COMB group, 59.7% of those in CBT, 54.9% of those receiving SRT, and 23.7% of those receiving the placebo responded after 12 weeks of treatment (i.e., were rated as "much improved" or "very much improved" by independent evaluators; Walkup et al., 2008). In a study examining sleep concerns with the CAMS sample, Caporino and colleagues (2015) reported that youth who participated in active treatment (CBT, SRT, or COMB) demonstrated greater reductions in separation-related sleep difficulties compared to youth in the placebo condition, and this effect was largest for youth randomized to SRT or COMB treatment. Youth randomized to CBT or COMB treatment demonstrated significantly greater reductions in dysregulated sleep (e.g., sleeplessness) compared to the placebo condition. Proposed treatments for decreasing sleep concerns in anxious youth include gradual exposure to feared nighttime stimuli, relaxation training, and targeting anxious cognitions.

Exposures are a key component of CBT for anxiety that may reduce sleep-related problems. For children who worry about harm befalling themselves or their caregivers, engaging in exposures centered on being alone at night can increase coping and comfort when falling asleep without the presence of a loved one. For example, parents can hide toys in the child's room, and have the child go on a "flashlight scavenger hunt" to practice being brave in the dark (Meltzer & Crabtree, 2015). Children can also practice being alone in the dark for increasing amounts of time, with rewards given for their brave efforts.

Many children and adolescents experience an increase in worry thoughts at bedtime when there are fewer distractions ("What if that creaking sound is a burglar on the stairs?" "What if I fail my test?" "What if there is a school shooting?"). Relaxation is one component of CBT for anxiety, and may help youth who experience nighttime worries fall asleep more quickly. In a study comparing a use of a behavioral reward system to use of a reward system in conjunction with CBT skills (e.g., relaxation strategies and coping self-talk) to address sleep concerns for children with nighttime fears, the addition of CBT strategies predicted maintenance of sleep-related gains at follow-up (Pincus, Weiner, & Friedman, 2012). One specific strategy often recommended prior to sleep is progressive muscle relaxation: youth tense and release muscle groups in succession, which helps to release muscle tension and calm the body. Child-friendly progressive relaxation scripts are available online (e.g., www.anxietybc.com). Additionally, visual imagery strategies can discourage verbal thinking by teaching youth to focus their mental energy on imagining a soothing mental image, perhaps one that also involves a rhythmic or repetitive movement (e.g., envisioning themselves swimming underwater in a pool, rocking in a hammock, floating through space, or in another relaxing environment). This nonverbal imagery can disrupt the perseverative "worry voice" often experienced by anxious youth, thereby aiding in sleep onset. For younger children, having a "worry time" that is not right before bed may help them "save" their worries for worry time, instead of worrying before bed. Use of CBT strategies to decrease nighttime worry and fear is likely to aid in improved sleep quantity and quality.

Proposed treatments for decreasing sleep concerns in anxious youth include gradual exposure to feared nighttime stimuli, relaxation training, and targeting anxious cognitions.

**Installing the Wiring: Sleep Associations**

For some children and adolescents with anxiety and comorbid sleep concerns, efficacious intervention that decreases anxiety symptoms (e.g., CBT for anxiety; medication like selective serotonin reuptake inhibitors) is sufficient to improve sleep. The small body of research examining the impact of CBT for anxiety on sleep concerns suggests that residual sleep problems often persist following a course of CBT (Caporino et al., 2015; Peterman et al., 2016); thus, many children with anxiety and sleep problems may benefit from targeted, behavioral sleep intervention. CBT protocols that include behavioral sleep strategies for anxious children have demonstrated favorable results (Pincus et al., 2012), including reduced sleep onset latency and improved sleep efficiency (Paine & Gradisar, 2011).

Children with separation or generalized anxiety may be fearful of falling asleep without having a caregiver present, and caregivers often accommodate the anxiety by staying in the child's room until they fall asleep or having the child co-sleep even when this arrangement is not preferred. Peterman and colleagues (2016) reported that increased parental accommodation was associated with more sleep-related problems in a sample of treatment-seeking children and adolescents with anxiety disorders. As a result, children can develop an undesired sleep-onset association, meaning they associate the presence of a caregiver with sleep onset and have increased difficulty falling asleep independently. To build independent sleep, a gradual fading process is often recommended in which parents gradually move further away from

their child's bed over the course of a number of weeks (Meltzer & Crabtree, 2015). For parents who have been lying next to their child, step one is for parents to sit next to the bed instead; physical contact can be maintained by having a hand on the child's back, or rubbing the child's back until they fall asleep. After 3–5 nights, caregivers can sit next to the bed without physical contact. Subsequent steps include moving further from the bed until parents are outside of the room as their child falls asleep. Once parents are no longer in the room, caregivers can progress to doing "checks" for increasing amounts of time (e.g., "checking" on their child every minute, then every two minutes, then every five minutes). As caregivers move further away from their child's bed, the child creates new, adaptive sleep associations until eventually the child is able to fall asleep independently.

By addressing poor associations at sleep onset, children similarly learn how to put themselves back asleep without a caregiver present when they wake in the night.

Children with trouble falling asleep often wake frequently in the night. It is common for most people to wake 4–5 times each night; however, most are able to put themselves back asleep so quickly that night wakings are forgotten by morning. For children who have undesired sleep-onset associations (e.g., associating sleep with having a caregiver present), falling back asleep when caregivers are no longer in the room can be quite difficult. As a result, children may go into their parents' room in the night, or call out for their parents to find them. It is recommended that when this happens, caregivers return youth to their room, and resume their post wherever they are in the gradual fading process (e.g., sitting next to bed until the child falls asleep). By addressing poor associations at sleep onset, children similarly learn how to put themselves back asleep without a caregiver present when they wake in the night.

Additionally, creating a reward system can help motivate youth to stay in their room when they wake up, and attempt falling back asleep by themselves. For example, youth can be given a set number of "bedtime passes" that are used each time they leave their room. Any unspent passes can be redeemed for a reward in the morning. As youth get better at falling back asleep following night wakings, the number of bedtime passes can be reduced.

Worry is the cardinal feature of generalized anxiety, and youth with anxiety may experience increased worries at night when there are fewer distractions (Peterman et al., 2015). Worries can interfere with sleep onset, often resulting in poor sleep efficiency (i.e., the ratio of time spent in bed to time spent asleep). Alfano and colleagues (2007) reported that youth with Generalized Anxiety Disorder (GAD) exhibited longer sleep-onset latency compared to healthy controls; thus, in addition to learning strategies in therapy to better manage worries, children and adolescents who report lying awake for long periods before falling asleep may benefit from stimulus control strategies. One such strategy is use of a temporary later bedtime. For example, an adolescent who gets into bed at 9:00 p.m., but does not fall asleep until 10:30 p.m., may benefit from temporarily getting into bed at 10:30 p.m. This helps to retrain the body to fall asleep quickly upon getting into bed. After 3–5 nights of falling asleep within 30 minutes, the bedtime can be moved forward (e.g., 10:15 p.m.; Meltzer & Crabtree, 2015). It is also recommended that the bed be reserved for sleeping alone to fortify beneficial sleep associations. For youth with sleep difficulties, the bed is a Netflix-free zone.

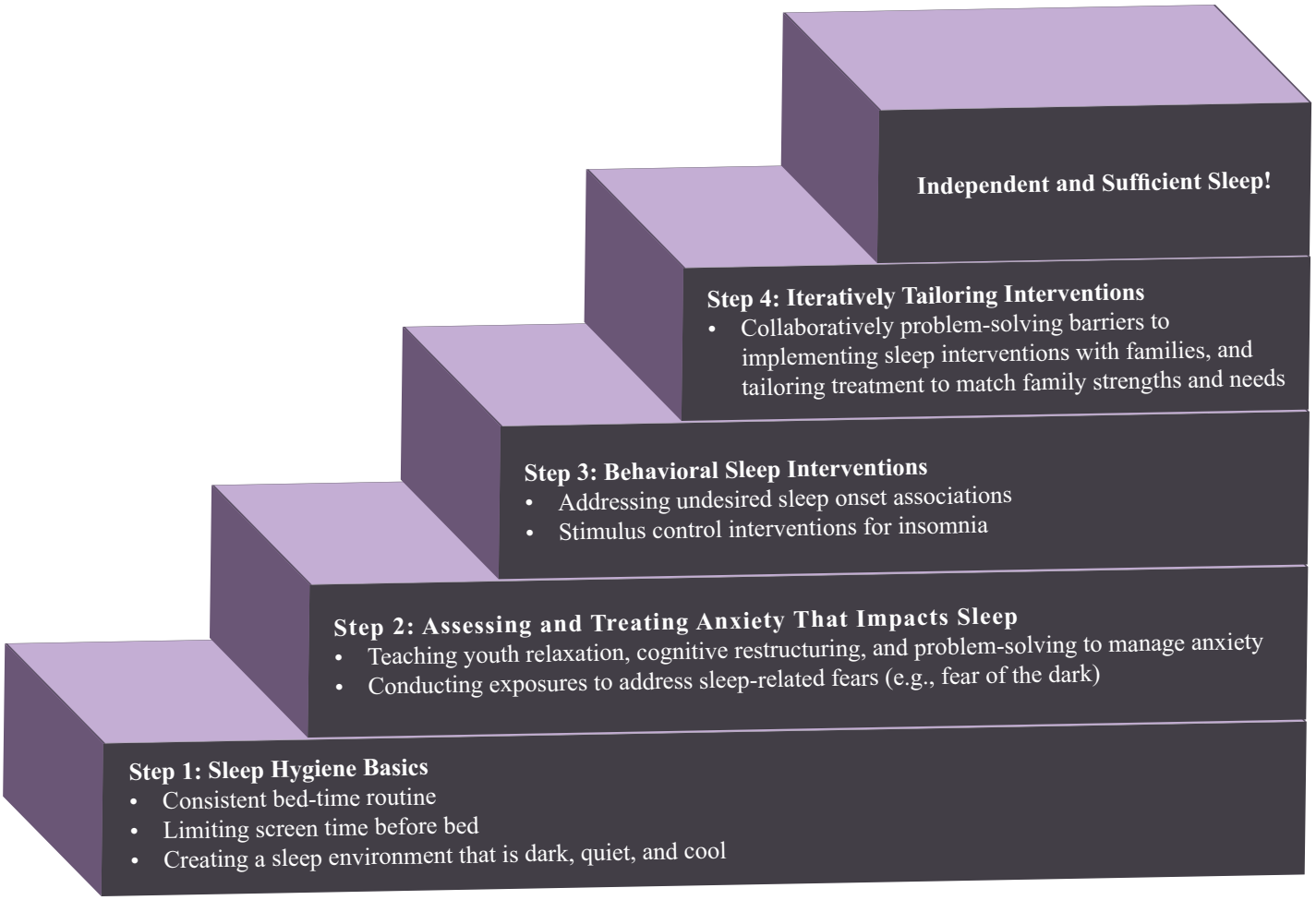
**Trimming and Finishing: Other Considerations**

Addressing sleep difficulties can be quite challenging, particularly when poor sleep patterns are long-standing. Parents are often reluctant to change for fear that sleep will temporarily worsen; moreover, it can be time-consuming and exhausting for parents to adhere to guidelines (e.g., returning children to their room in the context of frequent night awakenings). Clinical skill is needed to meet parents where they are. To increase the likelihood of success, addressing sleep hygiene basics first is recommended (e.g., establishing a consistent bed-time routine; limiting screen time; increasing physical activity during the day, but not before bed; creating a sleep-conducive environment that is dark, quiet, and cold). When heightened anxiety contributes to sleep difficulties, participation in an empirically supported treatment (e.g., CBT) is highly recommended.

Other tips include capitalizing upon weekends and holiday/school breaks when making changes related to sleep onset (e.g., gradually fading parents out of the room; establishing a temporary later bedtime). When family members do not have the pressure of school or work, adhering to behavioral sleep guidelines can be easier when faced with excessive reassurance seeking, frequent night awakenings and/or tantrums. In families where there are multiple caregivers, family members can alternate who is responsible for bedtime and night wakings—taking care to follow consistent procedures common to all caregivers.

Prior to making sleep changes, it is recommended that families and clinicians collaboratively problem-solve potential pitfalls. In particular, given that children with elevated anxiety often have parents who are also anxious, identifying and addressing parental worries prior to implementing behavioral sleep interventions may circumvent later difficulties. For example, identifying a caregiver's worry—that making changes to their child's sleep

**Figure 1.**




routine may negatively impact school performance—allows parents and clinicians to collaboratively find a solution, whether that be starting sleep changes over a long weekend, or helping parents to identify their own coping thoughts to manage worries ("My child can handle being tired one day. Improving sleep now will likely help their ability to focus in school later on.").

Should sleep difficulties persist, families may want to consult with their pediatrician about potential medical sleep disorders or complications (e.g., sleep apnea; reflux), and/or medications to help with sleep onset (e.g., melatonin). The process of building independent sleep for anxious youth can be challenging for families and clinicians, but the final product is worth losing sleep over.

Babysleep.com and preciouslittlesleep.com are useful websites for parents. The Magination Press book, *What to do when you dread your bed* (Huebner, 2005) is useful to parents and young readers. *Pediatric Sleep Problems: A Clinician's Guide to Behavioral Interventions* (Meltzer & Crabtree, 2015) or *A Clinical Guide to Pediatric Sleep* (Mindell & Owens, 2015) are useful resources for clinicians.

## A Return to the Case Scenario

After completing semi-structured clinical interviews using the ADIS-C/P (Silverman & Albano, 1996), you determine that 7-year-old Sophie is experiencing interfering and uncontrollable worries in a number of domains, including worries about meeting her own high expectations in sports and school, worries about world events, fear of the dark, and worries about getting hurt. Both Sophie and her parents report that Sophie's worries increase at night, when she fears burglars or scary creatures in the dark. Sophie endorsed that she sees her parents as safety figures, and she is less worried about bad things happening when a trusted adult is with her at night. Given Sophie's experience of excessive, uncontrollable worry and associated difficulty sleep-

ing, she meets criteria for Generalized Anxiety Disorder.

Administration and review of a sleep diary reveals that, after being tucked in for the night, Sophie takes 30 minutes to an hour to fall asleep: she gets out of bed 3–5 times until her parents lie down next to her, at which point she falls asleep. Sophie then wakes in the night, and is unable to fall back asleep. She goes into her parents' room, and sleeps in their bed until morning; in addition to worries that interfere with sleep-onset, Sophie has also developed an undesired sleep-onset association, associating the physical presence of a parent lying next to her with sleep. It is as if she falls asleep using a pillow to support her head, but the pillow walks away in the night. Of course she has to go find her metaphorical pillow to fall back asleep!

Given presenting concerns, you recommend a three-pronged approach: 1) assessing and addressing sleep hygiene, which includes creating a sleep-conducive bedroom environment for Sophie that is dark, quiet, and cool, 2) a course of CBT for anxiety to enable Sophie to learn skills to manage day and nighttime worries, which includes gradual exposures to feared situations, and 3) behavioral sleep interventions, which involve coaching Sophie's parents to gradually fade away their nighttime presence, progressing from sitting next to Sophie's bed at night to using a bedtime pass system to reward Sophie for staying in her bed the entire night.

Of course, treatment is not without its hiccups. Early on, Sophie's parents discovered that when they sit next to Sophie's bed at night, Sophie engages in frequent reassurance-seeking (e.g., "Did you turn on the alarm system?" "What happens if I forget my lines in the presentation?"). To address this problem, Sophie's parents remind Sophie to use visual imagery to interrupt her worry voice: Sophie likes to imagine herself floating in space. Sophie's parents also let Sophie know that they will leave the room unless Sophie is engaging in sleep-consistent behaviors: eyes shut, mouth closed, and body calm. It takes about a week for Sophie to learn that her parents mean business, and leave whenever she tries to talk.

Your recommendation that Sophie's parents return Sophie to her room when she wakes in the night is the trickiest to adhere to. In fact, as treatment progresses, you and Sophie's parents notice a slight increase in Sophie's night wakings. Detective work reveals that Sophie's parents bring her back to her room the first and second time she wakes in the night; by the third or fourth time, they are too exhausted, thus reinforcing Sophie for waking up more in the night. To meet parents where they are, you recommend that they temporarily postpone returning Sophie to her room until an upcoming break, when parents indicate that they will have more stamina to consistently return her to bed. You also recommend that parents alternate nights, and reinforce each other for sacrificing their short-term sleep for the possibility of long-term gains.

Over the course of treatment, Sophie learns to boss back her worry voice, and to fall asleep without her parents lying next to her at night. Exposures centered on Sophie spending increasing amounts of time alone in her room at night help Sophie become more comfortable being in the dark by herself. Once Sophie disrupts the association between sleep and parental presence, she is able to put herself back to sleep when she wakes in the night, and no longer needs to go find her parental pillow. Building Sophie's ability to sleep independently is both a complex and rewarding project.

*References available at NationalRegister.org*

# Assessing and Treating Sleep Difficulties in Anxious Children and Adolescents

## References


Alfano, C. A., Ginsburg, G. S., & Kingery, J. N. (2007). Sleep-Related Problems Among Children and Adolescents With Anxiety Disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, *46*(2), 224–232. https://doi.org/10.1097/01.chi.0000242233.06011.8e

Brand, S., Gerber, M., Beck, J., Hatzinger, M., P?hse, U., & Holsboer-Trachsler, E. (2010). High Exercise Levels Are Related to Favorable Sleep Patterns and Psychological Functioning in Adolescents: A Comparison of Athletes and Controls. *Journal of Adolescent Health*, *46*(2), 133–141. https://doi.org/10.1016/j.jadohealth.2009.06.018

Buysse, D. J., Ancoli-Israel, S., Edinger, J. D., Lichstein, K. L., & Morin, C. M. (2006). Recommendations for a Standard Research Assessment of Insomnia. *Sleep*, *29*(9), 1155–1173. https://doi.org/10.1093/sleep/29.9.1155

Caporino, N. E., Read, K. L., Shiffrin, N., Settipani, C., Kendall, P. C., Compton, S. N., … Albano, A. M. (2015). Sleep-Related Problems and the Effects of Anxiety Treatment in Children and Adolescents. *Journal of Clinical Child & Adolescent Psychology*, 1–11. https://doi.org/10.1080/15374416.2015.1063429

Chase, R. M., & Pincus, D. B. (2011). Sleep-Related Problems in Children and Adolescents With Anxiety Disorders. *Behavioral Sleep Medicine*, *9*(4), 224–236. https://doi.org/10.1080/15402002.2011.606768

Costello, J., Egger, H. & Angold, A. (2005). The Developmental Epidemiology of Anxiety Disorders: Phenomenology, Prevalence, and Comorbidity. *Child and Adolescent Psychiatric Clinics of North America*, *14*(4), 631–648.

Figueiro, M. (2016). Delayed sleep phase disorder: clinical perspective with a focus on light therapy. *Nature and Science of Sleep*, 91. https://doi.org/10.2147/NSS.S85849

Figueiro, M., & Overington, D. (2016). Self-luminous devices and melatonin suppression in adolescents. *Lighting Research & Technology*, *48*(8), 966–975. https://doi.org/10.1177/1477153515584979

Hale, L., & Guan, S. (2015). Screen time and sleep among school-aged children and adolescents: A systematic literature review. *Sleep Medicine Reviews*, *21*, 50–58. https://doi.org/10.1016/j.smrv.2014.07.007

Harsh, J. R., Easley, A., & LeBourgeois, M. K. (2002). A measure of sleep hygiene. *Sleep*, *25*, A316–A317.

Hollon, S. & Beck, A. (2013). Cognitive and Cognitive-Behavioral Therapies. In *Handbook of Psychotherapy and Behavior Change*(M. J. Lambert, pp. 393–443). Hoboken, NJ, USA: John Wiley & Sons.

Huebner, D. (2008). *What to Do when You Dread Your Bed: A Kids Guide to Overcoming*

*Problems with Sleep*. Magination Press.

March, J. S. (1997). *Manual for the multidimensional anxiety scale for children (MASC).* Toronto: Multi-Health Systems.

March, J. S., Parker, J. D. A., Sullivan, K., Stallings, P., & Conners, C. K. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor Structure, Reliability, and Validity. *Journal of the American Academy of Child & Adolescent Psychiatry*, *36*(4), 554–565. https://doi.org/10.1097/00004583-199704000-00019

Meltzer, L. J., & Crabtree, V. M. (2015). *Pediatric sleep problems: A clinician's guide to behavioral interventions*. Washington, DC: American Psychological Association.

Mindell, J. A., & Owens, J. A. (2015). *A clinical guide to pediatric sleep: diagnosis and*

*management of sleep problems*. Lippincott Williams & Wilkins.

Mindell, J. A., Telofski, L. S., Wiegand, B., & Kurtz, E. S. (2009). A Nightly Bedtime Routine: Impact on Sleep in Young Children and Maternal Mood. *Sleep*, *32*(5), 599–606. https://doi.org/10.1093/sleep/32.5.599

Owens, J., Spirito, A., & McGuinn, M. (2000). The Children's Sleep Habits Questionnaire (CSHQ): Psychometric properties of a survey instrument for school-aged children. *SLEEP-NEW YORK*, *23*(8), 1043–1052.

Paine, S., & Gradisar, M. (2011). A randomised controlled trial of cognitive-behaviour therapy for behavioural insomnia of childhood in school-aged children. *Behaviour Research and Therapy*, *49*(6-7), 379–388. https://doi.org/10.1016/j.brat.2011.03.008

Paruthi, S., Brooks, L. J., Ambrosio, C. D', Hall, W. A., Kotagal, S., Lloyd, R. M., … Wise, M. S. (2016). Consensus Statement of the American Academy of Sleep Medicine on the Recommended Amount of Sleep for Healthy Children: Methodology and Discussion. *Journal of Clinical Sleep Medicine*, *12*(11), 1549–1561. https://doi.org/10.5664/jcsm.6288

Peterman, J. S., Carper, M. M., Elkins, R. M., Comer, J. S., Pincus, D. B., & Kendall, P. C. (2016). The effects of cognitive-behavioral therapy for youth anxiety on sleep problems. *Journal of Anxiety Disorders*, *37*, 78–88. https://doi.org/10.1016/j.janxdis.2015.11.006

Pincus, D. B., Weiner, C. L., & Friedman, A. G. (2012). Differential Efficacy of Home Monitoring and Cognitive-Behavioral Treatment for Decreasing Children's Maladaptive Nighttime Fears. *Child & Family Behavior Therapy*, *34*(1), 1–19. https://doi.org/10.1080/07317107.2012.654426

Silverman, W. K., & Albano, A. M. (1996). *Silverman WK, Albano AM (1996), The Anxiety Disorders Interview Schedule for Children for DSM-IV: (Child and Parent Versions). San Antonio, TX: Psychological Corporation*.

Spence, S. H. (1998). A measure of anxiety symptoms among children. *Behaviour Research and Therapy*, *36*(5), 545–566.

Spence, S. H., Barrett, P. M., & Turner, C. M. (2003). Psychometric properties of the Spence Children's Anxiety Scale with young adolescents. *Journal of Anxiety Disorders*, *17*(6), 605–625. https://doi.org/10.1016/S0887-6185(02)00236-0

Spence, S. H., & Rapee, R. M. (1999). *Preschool anxiety scale (parent report)*. University of Queensland.

Swan, A. J., & Kendall, P. C. (2016). Fear and Missing Out: Youth Anxiety and Functional Outcomes. *Clinical Psychology: Science and Practice*, *23*(4), 417–435. https://doi.org/10.1111/cpsp.12169

Walkup, J. T., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S. N., Sherrill, J. T., … Kendall, P. C. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine*, *359*, 2753–2766. http://doi.org/10.1056/NEJMoa0804633