

Introduction

Have you ever heard any of the following in your clinical practice?

- “My child is a terrible sleeper.”
- “She wakes up several times every single night.”
- “Bedtime is a nightmare at our house, it will take at least 1 to 2 hours to get him down.”
- “She is afraid of her room and afraid of sleeping, so we just let her sleep with us.”
- “He is often late to school because he can’t wake up, even with three alarm clocks and us throwing water on him.”
- “She has her days and nights mixed up.”

If the answer is yes, then this is the book for you. Sleep problems are common in children, with estimates of 25% to 40% of youth experiencing a sleep problem at some point during childhood or adolescence (Mindell & Owens, 2010; Owens, 2005). For children, parents, and families,

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Pediatric Sleep Problems: A Clinician’s Guide to Behavioral Interventions, by L. J. Meltzer and V. M. Crabtree

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sleep problems pose a number of issues. Not only is the child not getting enough sleep, which can negatively impact growth, development, learning, and behavior, but parent sleep is also disrupted. Further, family stress is increased at bedtime, when everyone is tired (and parents often want their own quiet time after the kids are asleep), and in the morning, when it is a constant battle to get a child up and going. Thus, it is not surprising that so many families present to clinicians wanting to address these sleep problems.

The good news is that many sleep problems respond quickly to behavioral interventions—including (but not limited to) bedtime problems and night wakings in young children (Mindell, Kuhn, Lewin, Meltzer, & Sadeh, 2006), anxiety (Gordon, King, Gullone, Muris, & Ollendick, 2007a; Simard, Nielsen, Tremblay, Boivin, & Montplaisir, 2008) and enuresis in middle childhood (Glazener, Evans, & Peto, 2005), and insomnia and delayed sleep–wake phase in adolescents (de Bruin, Oort, Bögels, & Meijer, 2014; Schlarb, Liddle, & Hautzinger, 2011; Wyatt, 2011). Treating many behavioral sleep problems is incredibly rewarding, as patients often get better within a short period of time, and families are very appreciative of the treatment advice and support that is given. With a little practice, and the right tools, any clinician can provide behavioral interventions for common sleep problems. We wrote *Pediatric Sleep Problems: A Clinician's Guide to Behavioral Interventions* to provide clinicians the necessary information and tools to address the most commonly seen behavioral sleep problems from infancy through adolescence. Because we know how busy all clinicians are, we designed this guide to be a handy and accessible resource that can be used in all types of clinical practice.

Pediatric Sleep Problems

Although some sleep problems resolve spontaneously, many become chronic. When left untreated, these sleep problems can result in significant daytime impairments (Beebe, 2011; Owens et al., 2014). Insufficient or disrupted sleep in youth negatively impacts mood (including increasing or exacerbating symptoms of psychiatric disorders, e.g., depression and anxiety; Gregory & Sadeh, 2012), behavior (Gruber, Cassoff, Frenette, Wiebe, & Carrier, 2012), social development, academic functioning (e.g., attention, concentration, learning; Beebe, Rose, & Amin, 2010; Gruber, Michaelson, et al., 2012; Sadeh, Gruber, & Raviv, 2003), and health (e.g., hypertension, weight gain; Beebe et al., 2013; Gangwisch et al., 2010; Hart et al., 2013). However, many common sleep problems are treatable with highly effective behavioral interventions.

In addition to the large number of typically developing children and adolescents with sleep problems, sleep disruption is frequently comorbid with psychiatric, neurodevelopmental, and medical disorders (Ivanenko, Crabtree, & Gozal, 2004; Konofal, Lecendreux, & Cortese, 2010; Lewandowski, Ward, & Palermo, 2011; Reynolds & Malow, 2011). Disrupted sleep is a hallmark feature of mood and anxiety disorders and may be predictive of severe mood disorders. Children with neurodevelopmental disorders, such as autism and attention-deficit/hyperactivity disorder, frequently have difficulties initiating and maintaining sleep, which often can disrupt the sleep of the entire family. In turn, difficulties with sleep can exacerbate challenging behaviors (e.g., inattention, self-regulation) in these populations. Finally, although children and adolescents with chronic medical conditions often have pain, nighttime care needs, and/or nighttime symptom exacerbation that disrupts their sleep, parents often are less strict with the basics of sleep (including a consistent nighttime routine and set bedtime); this can result in deficient or poor-quality sleep and may exacerbate daytime symptoms of their illnesses.

Although sleep problems are common, most health care providers, including psychologists, other mental health professionals, physicians, and nurses, receive very little (if any) training in sleep medicine, let alone pediatric behavioral sleep medicine (Lee et al., 2004; Mindell et al., 2013; Rosen & Zozula, 2000). Only 6% of clinical psychology training programs in the United States and Canada include a didactic course on sleep (Meltzer, Phillips, & Mindell, 2009). Physicians fare no better, with an average of only 4 hours of sleep medicine training (Rosen et al., 1998). Limited information is available for health care providers who want to learn more about pediatric sleep problems, with the available texts focused heavily on the medical side of sleep problems, and treatments for behavioral sleep problems often limited to only one or two chapters. Further, the information provided is heavy on the research and light on the practical application of interventions for behavioral sleep problems.

Drawing from the literature and our own clinical practices, we have presented numerous workshops and postgraduate courses to clinicians from a variety of backgrounds (i.e., physician, nurses, psychologists, social workers). After numerous requests for handouts, standardized treatment guides, and/or recommendations on how to handle the most common sleep issues that present in clinical practice, we decided to write this book for all types of pediatric providers. The purpose of this clinical guide is to provide clinicians with developmentally appropriate information that will enable them to treat commonly seen behavioral sleep problems. This book integrates the most up-to-date treatment approaches for sleep problems in infants, toddlers, children, and adolescents. With a concise format, the book provides clinicians a hands-on

guide to behavioral treatments for pediatric sleep problems, with practical information, including

- the presentation, prevalence, and etiology of sleep problems;
- options for different treatment approaches, including considerations across development and for special populations;
- discussions of how and why treatments work;
- step-by-step instructions for implementing treatments;
- examples of what to say to families;
- ways to manage potential pitfalls; and
- treatment handouts for patients/families.

This clinical guide takes the empirically supported treatments in the literature and describes different approaches for how to implement these in your practice. This includes adapting the frontline treatments that clinicians are most likely to use in everyday practice and providing a tailored treatment plan for each individual patient.

It is important to note that this clinical guide is not a comprehensive review of every treatment that has been proposed and/or studied in the literature. Instead, it enables clinicians the flexibility of selecting from among the most common and effective interventions that can be used to address the same presenting problem. This guide is also not focused on the treatment of sleep disorders that primarily require medical interventions, including obstructive sleep apnea (OSA), narcolepsy, and periodic limb movements in sleep. Further, although a brief discussion about pharmacological or other medical interventions for behavioral sleep problems may be provided when appropriate, in general these treatment approaches are also beyond the scope of this book. That said, we believe clinicians will find this book to be a valuable resource for the treatment of behavioral sleep problems that commonly present in pediatric practice.

Overview of the Book

Clinicians have limited time and multiple competing demands. With this in mind, we have organized *Pediatric Sleep Problems: A Clinician's Guide to Behavioral Interventions* in three primary sections to facilitate learning opportunities about sleep and behavioral interventions, clinical basics, and detailed interventions for different presenting problems.

PART I: THE BASICS OF PEDIATRIC BEHAVIORAL SLEEP MEDICINE

Although it may be tempting for readers to simply jump to the treatment section, we strongly recommend starting with the basics of pediatric

sleep medicine. This section was designed for all types of clinicians, including mental health providers who have received little (if any) training about typical sleep and sleep disorders; medical providers who have received little (if any) training in behavior theory and behavioral interventions; and all clinicians who have previously not used, or have had limited training in, pediatric behavioral sleep medicine.

Chapter 1 focuses on the basics of pediatric sleep, including the basic building blocks that are essential for all behavioral interventions. We begin the chapter with information about sleep and sleep regulation and then review typical sleep across development. This is followed by a discussion of healthy sleep habits and the critical features of a consistent nighttime routine and set bedtime.

Chapter 2 provides an overview of the most common pediatric sleep disorders, including those that primarily have a medical etiology (e.g., OSA, narcolepsy) and those that have a behavioral etiology (e.g., insomnia). For those new to the field of pediatric sleep, this chapter is essential to understand the different types of sleep disorders, as many children presenting for behavioral sleep issues may also have a comorbid medical sleep disorder (e.g., OSA).

Chapter 3 focuses on behaviorism. Before implementing many of the behavioral interventions outlined in this book, it is important to understand more about the theories behind these treatments. In particular, we review the concepts of behavioral theories in Chapter 3, including how these theories contribute to the development of behavioral sleep problems and how to apply these theories effectively when implementing a behavioral intervention. We review both classical conditioning and operant conditioning, and we provide information on how these theories are related to common pediatric sleep problems.

PART II: CLINICAL BASICS FOR PEDIATRIC BEHAVIORAL SLEEP MEDICINE

The chapters in this part focus on the clinical basics required for treatment implementation, including information on the clinical assessment of sleep and strategies for working with families to increase treatment success.

Chapter 4 provides a step-by-step guide for assessing patients for sleep problems, including detailed questions to ask, information about why it is important to ask these questions, and follow-up prompts for positive responses. Before treatment planning and implementation can begin, clinicians must first have a thorough understanding of the presenting problem. In addition to questions that screen for physiologically based sleep disorders (e.g., OSA), behavioral sleep questions ask about sleep schedules, sleep routines, and psychosocial factors that may be affecting sleep. We also review diagnostic and monitoring tools that may be used in conjunction with the clinical interview.

Chapter 5 considers how sleep problems and treatments impact families, as well as the need to design interventions with a successful goal-oriented approach. Strategies such as motivational interviewing are reviewed. We often joke that we have an almost 100% treatment success rate with certain pediatric behavioral sleep interventions—as long as the patients and families do what we ask. But the truth of the matter is that without patient and parent buy-in, there will be no treatment success. In addition, every patient and family is different, and thus it is essential to tailor interventions that draw on patient/family strengths.

PART III: PRESENTING PROBLEMS

We organized the chapters in Part III by presenting problem for quick and easy reference within a clinical practice. However, pediatric patients often present with more than one issue; thus, a multicomponent intervention is commonly needed. In addition, we present multiple treatment options for each presenting problem, further enabling a tailored intervention. The decision about which treatment to use should be based on a combination of clinician judgment and patient/parent buy-in.

Although some behavioral treatments are best used only in certain age groups, many of the interventions described in this guide can be used across development. That said, certain presenting problems are more common in younger children or in older children. Thus, Part III is loosely organized by age, beginning with sleep problems most commonly seen in young children, namely, sleep-onset associations, bedtime problems (due to stalling, protests, and “curtain calls”), and nighttime awakenings. This is followed by sleep problems most commonly seen in school-age children and adolescents (nighttime fears/anxiety, nightmares, insomnia, and delayed sleep–wake phase), with the last few chapters focused on sleep problems that can present at any age.

Each chapter in Part III starts with an overview of the presenting problem. For each intervention discussed, we present a brief overview of the empirical evidence for different interventions, goals for treatment, and an explanation of the concepts behind how the treatment works. This is followed by a step-by-step guide to implementation, as well as suggestions for how to manage potential pitfalls. When appropriate, modifications for different ages/developmental stages are provided, as well as considerations for special populations and/or contraindications for treatment use. Throughout each treatment chapter, readers will find examples of clinical cases, as well as example scripts for how to explain certain concepts and/or treatments to patients and families. Exhibits within each chapter include some tricks of the trade that we have repeatedly found to be useful in our own clinical practices. Although not empirically validated, these interventions are commonly used in

conjunction with empirically supported treatments, providing a comprehensive treatment approach for patients and families.

Chapter 6 focuses on common complaints in infants and toddlers who are in a crib. This includes “my child has never slept through the night” and “he wakes up multiple times every night.” Although nighttime awakenings can be seen across development, the treatments provided in Chapter 7 focus primarily on young children who have not learned to fall asleep independently and thus are unable to return to sleep following typical nighttime arousals without parental assistance (e.g., nursing, rocking). In this chapter, it is notable that many of the different treatment options are really variations on a theme (i.e., a child must learn to fall asleep independently). But the adaptation of these options enables the clinician to tailor the intervention for individual families, basing treatment decisions on a combination of the child’s temperament and the parent’s tolerance for crying.

Chapter 7 addresses the bedtime problems more commonly seen in older children who are no longer in cribs. The presenting complaint is typically a child who has difficulty falling asleep that is accompanied by a prolonged (1–2 hour) bedtime that is frustrating for both the parents and the child. For some families, these bedtime problems end only when parents remain with the child until she is asleep. Along with the different behavioral interventions outlined, instructions for working with parents on how to set limits at bedtime are reviewed.

Like Chapter 7, Chapter 8 focuses on the presenting complaint of a child who has difficulty falling asleep at bedtime. However, Chapter 8 focuses more on older children whose bedtime difficulties stem from fears, anxiety, and/or recurrent nightmares. Treatment approaches in this chapter include both cognitive and behavioral strategies to help the child gain mastery over his or her sleep.

For older children and adolescents, a common presenting problem is difficulty falling asleep, difficulty staying asleep, and/or waking early in the morning and being unable to return to sleep. These are symptoms of insomnia, which is the focus of Chapter 9. The primary treatment discussed in this chapter is cognitive–behavioral therapy for insomnia, with a description of the different components of this approach, namely, stimulus control therapy, sleep restriction therapy, and cognitive restructuring.

The primary complaint for adolescents with delayed sleep–wake phase is a prolonged sleep-onset latency, an inability to fall asleep before a certain time (e.g., 2:00 a.m.–4:00 a.m.), and difficulties waking in the morning for school. Although this may sound similar to insomnia, there are a number of differences in terms of etiology, sleep continuity, and daytime impairment. Thus, the treatments in Chapter 10 focus on realigning adolescents’ internal clocks to better match their required daytime schedule.

Chapter 11 focuses on nonrapid eye movement disorders of arousal, namely, confusional arousals, sleep terrors, and sleepwalking. These partial arousal parasomnias often present with complaints about nighttime awakenings accompanied with distress or purposeful behaviors, yet the child does not appear fully awake. Detailed instructions about safety and reassurance are presented, along with how and when to implement scheduled awakenings.

Chapter 12 addresses nocturnal enuresis, or nighttime bed-wetting, a relatively common disorder in school-age children, and one that persists for some adolescents. Behavioral treatment approaches outlined include urine alarms (also known as the bell and pad), full spectrum treatment, and scheduled awakenings.

For some children, positive airway pressure (PAP) therapy is required for the treatment of OSA. However, PAP adherence is poor across pediatric patients. The most common reasons for nonadherence include discomfort and a lack of patient/parent understanding or appreciation about the importance and benefits of using PAP daily. Therefore, Chapter 13 focuses on patient education and a multiple component behavioral intervention that includes differential reinforcement, desensitization, and distraction.

Finally, Appendix A provides additional information and resources for both clinicians and families, including details about websites and professional organizations related to the book's content. Appendix B comprises more than 30 handouts that can be used in your clinical practice. These handouts were designed to support the information provided to patients/parents during a clinical visit, including step-by-step instructions or guidance on how to implement many of the treatments described in Part III, a brief rationale for the intervention, and reminders to help families be successful. All of the handouts are also available for free online at <http://pubs.apa.org/books/supp/meltzer/>.

The Bottom Line

Children should spend up to 40% of their lives sleeping by the age of 18 years. However, for many children, sleep is not as simple as it seems. We wrote this book to help clinicians address the most commonly seen behavioral sleep issues in infants, children, and adolescents. It is designed to be a user-friendly resource for busy clinicians, with a brief description of how different sleep problems present, a basic explanation of how the treatments work, a step-by-step description of how to implement different treatments, and handouts that can be used in a clinical setting.