The Science of Sleep

How School Schedules Impact Children's Lives

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Disclosure

- My expenses for this talk are supported by Multi-Health Systems.
- I have developed tests marketed by Multi- Health Systems, Pro-Ed, Guinti Psychometrics and Western Psychological Services.
- I have authored books marketed by Springer, Wiley, Guilford, Double Day, McGraw Hill, Brookes, Kluwer and Specialty Press.
- I am past Editor in Chief of the Journal of Attention Disorders (Sage) and Co-Editor of the Encyclopedia of Child Development (Springer).

The Mysteries of Sleep

- **"I'll sleep when I'm dead."**
  — *Warren Zevon*, rock musician.
- **"Sleep is the best meditation."**
  — *Dalai Lama*
- **"A good laugh and a long sleep are the best cures in the doctor's book."**
  — *Irish Proverb*

The Mysteries of Sleep

- **"Sleep is the golden chain that ties health and our bodies together."**
  Thomas Dekker
- **"The best bridge between despair and hope is a good night's sleep."**
  E. Joseph Cossman
- **"Man should forget his anger before he lies down to sleep."**
  Mahatma Gandhi

Objectives for School Psychologists

- Understand developmental changes in sleep physiology and timing across childhood and adolescence.
- Explain how biological shifts during puberty delay sleep onset and alter sleep architecture, leading to chronic sleep restriction in teens (Tarokh et al., 2016).
- Discuss how these developmental changes intersect with school schedules and social pressures, producing a mismatch between biological sleep needs and environmental demands.

Objectives for School Psychologists

- Recognize the reciprocal links between sleep and mental health.
- Present evidence that insufficient or disturbed sleep predicts depression and anxiety, and that depression further disrupts sleep, forming a bidirectional relationship (Roberts & Duong, 2014; Marino et al., 2020).
- Emphasize the role of sleep screening in mental health assessments, and the integration of sleep-focused interventions (e.g., CBT-I) in youth therapy.

Objectives for School Psychologists

- Identify environmental and behavioral factors that undermine sleep quality and duration.
- Highlight modifiable risk factors—excessive screen use, inconsistent bedtime routines, and lack of sleep education—that predict poor sleep outcomes (Simšek et al., 2019; Magee et al., 2022).
- Encourage school psychologists to promote structured routines and digital curfews as part of psychoeducational and family interventions.

Objectives for School Psychologists

- Link sleep to cognitive and academic outcomes.
- Summarize research showing that shorter sleep duration and delayed sleep timing impair executive function, emotional regulation, and academic performance (Yang et al., 2022; Dutil et al., 2022).
- Position sleep as a core cognitive health variable, essential for learning, memory consolidation, and attention regulation.

Objectives for School Psychologists

- Promote school and community strategies to reduce sleep inequities.
- Present findings that sleep disparities are more common in low-income and minority children, tied to neighborhood and family stressors (Claussen et al., 2023).
- Advocate for system-level changes including later school start times, equitable sleep environments, and public health campaigns treating sleep as a pillar of child well-being (Grimaldi et al., 2023).

Why Does Sleep Matter

Why Does Sleep Matter?

- All animals sleep, despite the risk of predators.
- Sleep takes up about 1/3 of human life. Evolution wouldn’t allow that unless it had real value.
- The question: **What evolutionary purpose does sleep serve?**

Sleep as Energy Conservation

- Sleep reduces metabolic demand when food is scarce or unnecessary (e.g., at night).
- Body temperature, activity levels, and energy use drop during sleep.
- Evolution may have favored animals that used sleep to conserve resources.

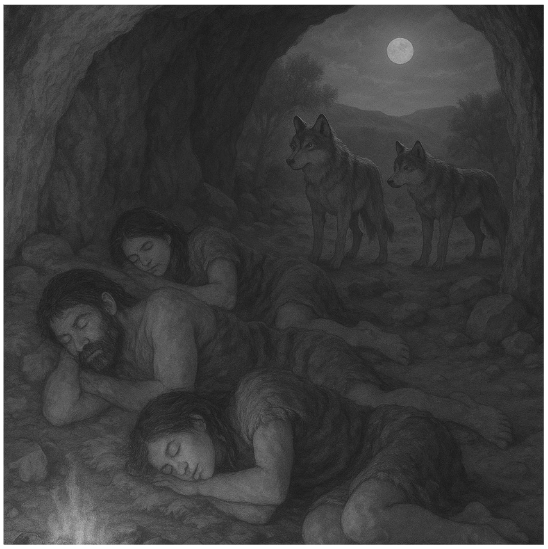
Sleep for Brain Maintenance

- Sleep clears toxins from the brain (e.g., beta-amyloid).
- Promotes synaptic pruning, the removal of weak or unused neural connections.
- These processes are critical for brain function and long-term survival.

Memory and Learning Advantage

- Sleep boosts memory consolidation turning experience into long-term knowledge.
- Dreams may help simulate threats and problem-solving.
- Evolutionary edge: better memory = better decisions, better survival.

Sleep as a Protective Behavior



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Sleep as a Protective Behavior

- Being inactive during vulnerable periods (e.g., night) reduces exposure to predators.
- Sleep aligns behavior with safe times of day (circadian rhythm).
- In essence: sleep hides you when you're most likely to get killed.

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Evolution Didn't Eliminate Sleep: It Refined It

- If sleep were useless, natural selection would've eliminated it.
- Instead, sleep evolved differently across species (e.g., dolphins sleep one brain hemisphere at a time).
- Conclusion: Sleep must serve multiple adaptive functions we're still uncovering.

The Science of Sleep

- Adolescents require sufficient sleep for cognitive function, emotional regulation, and overall academic success.
- However, early school start times disrupt natural sleep cycles, leading to chronic sleep deprivation, lower performance, and increased mental health challenges.
- This presentation explores the latest research on adolescent sleep science and the proven benefits of later school start times.
- Participants will engage with case studies, policy shifts, and real-world implementation strategies to understand how data-driven scheduling changes can improve student outcomes.

What We Know About Sleep in Youth

Adolescents experience biological shifts that delay sleep timing, leading to chronic sleep restriction and increased risk for depression, anxiety, and impaired cognitive performance (Tarokh et al., 2016; Roberts & Duong, 2014).

Sleep deprivation is linked to mental health issues, especially depression, both as a consequence and a predictor, creating a cyclical relationship (Roberts & Duong, 2014; Marino et al., 2020).

What We Know About Sleep in Youth

Short sleep and poor sleep quality are widespread among children and adolescents, with many studies reporting that over 30–80% of youth don’t get sufficient, high-quality sleep (Claussen et al., 2023; Simšek et al., 2019).

Environmental and lifestyle factors, such as screen time, inconsistent routines, and lack of sleep education, are strongly associated with sleep disturbances and reduced duration (Simšek et al., 2019; Magee et al., 2022).

What We Know About Sleep in Youth

Cognitive development is tightly linked to sleep, especially during key neurodevelopmental windows in childhood and adolescence (Yang et al., 2022).

Non-pharmacological interventions work, though modestly, sleep education, environmental changes, and behavioral routines can lengthen sleep and improve quality (Magee et al., 2022).

Sleep disparities exist by socioeconomic and demographic factors, children in marginalized, lower-income, or high-stress environments are more likely to experience inadequate sleep (Claussen et al., 2023).

What We Know About Sleep in Youth

Late sleep timing is an independent risk, even beyond total duration, associated with lower academic performance, emotional dysregulation, and behavioral problems (Dutil et al., 2022).

Sleep problems early in life predict long-term difficulties, including emotional and behavioral issues into adolescence, highlighting the importance of early screening and intervention (Wang et al., 2016; Matricciani et al., 2019).

Differences by Age Group

Children (5–10 years)

- **Sleep needs are higher.** Children typically require 9–11 hours of sleep. Chronic short sleep at this age is associated with slowed neurocognitive development (Yang et al., 2022), poorer emotion regulation, and increased hyperactivity.
- **Parental control and routines are more influential.** At younger ages, parents set bedtime rules, and studies show that consistent bedtime routines are a strong predictor of better sleep (Magee et al., 2022).
- **Sleep problems often present physically.** In children, sleep deprivation more often appears as irritability, behavioral outbursts, or hyperactivity—sometimes misinterpreted as ADHD.

Differences by Age Group

Preteens and Early Adolescents (11–13 years)

- **Transition period.** Sleep begins to shift later due to biological and social changes. Children start pushing back bedtimes but still often have early school start times, creating a sleep debt.

- **Increased sensitivity to social and screen-related distractions.** Technology use begins to have a stronger effect, displacing sleep and disrupting circadian rhythms (Simšek et al., 2019).

- **Mental health risks begin to rise.** Early signs of mood disorders linked to poor sleep become more pronounced in this age group (Roberts et al., 2009).

Differences by Age Group

Mid to Late Adolescents (14–18 years)

- **Biological delay in sleep phase is strongest.** Teens naturally fall asleep later and struggle with waking early, especially with school schedules misaligned to their circadian clocks (Tarokh et al., 2016).
- **High rates of chronic sleep deprivation.** Many adolescents average fewer than 7 hours per night, well below recommended levels, which increases risks for depression, poor academic performance, and obesity (Marino et al., 2020; Grimaldi et al., 2023).
- **Greater autonomy, less parental control.** Older adolescents make more of their own sleep decisions, which can worsen irregular sleep schedules and lead to "social jet lag" on weekends.

Summary

- **Younger children** (5–10) are highly responsive to structured routines and parental influence. Sleep problems often present behaviorally and are easier to modify with family intervention.
- **Preteens** begin shifting biologically and socially toward adolescent patterns but may still benefit from parental involvement.
- **Teenagers** (14–18) face the perfect storm: biological shifts, increased academic/social pressure, late-night device use, and reduced adult supervision. Sleep deprivation becomes chronic and impacts mental health more profoundly.

Tarokh, L., Saletin, J. M., & Carskadon, M. A. (2016). Sleep in adolescence: Physiology, cognition and mental health. *Neuroscience & Biobehavioral Reviews*, 70, 182-188. https://doi.org/10.1016/j.neubiorev.2016.08.008

This review examines how adolescent sleep timing, duration and architecture shift alongside brain maturation, and links these changes to cognitive performance and mental-health outcomes. It argues sleep is a key window into cortical development and waking cognition in adolescence.

Roberts, R. E., & Duong, H. T. (2014). The prospective association between sleep deprivation and depression among adolescents. *Sleep*, 37(2), 239-244. https://doi.org/10.5665/sleep.3388 PMC+2Periódicos CAPES+2

In this longitudinal cohort of youths aged 11-17, sleep deprivation (≤6 h/night) predicted subsequent major depression; depression also increased risk of future short sleep. The findings point to a reciprocal relationship between insufficient sleep and depression among adolescents.

Matricciani, L., et al. (2019). Children’s sleep and health: A meta-review. *Sleep Medicine Reviews*, 43, 71-83. https://doi.org/10.1016/j.smrv.2018.10.016

This meta-review compiles systematic reviews on sleep in children, showing that shorter sleep duration and poorer quality associate with various health outcomes (obesity, behavioural issues, cognition). It highlights heterogeneity in findings and calls for longitudinal and intervention studies.

Yang, F. N., et al. (2022). Effects of sleep duration on neurocognitive development in school-aged children. *Sleep Advances*, 3(1), zsac019. https://doi.org/10.1093/sleepadvances/zsac019

This two-year study of school-aged children found insufficient sleep predicted declines in cognitive functioning and changes in brain structure. It emphasizes that adequate sleep duration is critical for neurodevelopment during childhood.

Grimaldi, M., et al. (2023). The longitudinal interplay between sleep, anthropometric indices and eating behaviours during adolescence: A systematic review with meta-analysis. *Nutrients*, 15(14), 3179. https://doi.org/10.3390/nu15143179

The meta-analysis found that longer sleep duration and better sleep quality were associated with lower BMI and fat percentage over time in adolescents. The effect size was small but consistent, underscoring sleep's role in developmental health

Magee, L., et al. (2022). Non-pharmacological interventions to lengthen sleep in healthy children: A systematic review and meta-analysis. *JAMA Pediatrics*, 176(10), 1058-1068. https://doi.org/10.1001/jamapediatrics.2022.2795862

This review of intervention studies found that behavioural and environmental modifications (bedtime routines, screen reduction, sleep education) produced modest improvements in sleep duration and quality in children, suggesting actionable strategies for promoting healthy sleep.

Claussen, A. H., Dimitrov, L. V., Bhupalam, S., & Wheaton, A. G. (2023). Short sleep duration: Children's mental, behavioural, and developmental disorders and demographic, neighbourhood, and family context in a nationally-representative sample. *Preventing Chronic Disease*, 20, 220408. https://doi.org/10.5888/pcd20.220408

Using U.S. national survey data (2016–2019), the study found ~35% of children had short sleep duration. These children were more likely to have mental/behavioural disorders, and were disproportionately from racial/ethnic minority, low-income and adverse-neighbourhood environments.

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Simšek, Y., et al. (2019). Sleep quality in adolescents in relation to age and sleep-related habitual and environmental factors. *Journal of Pediatric Research*, 7(1), 30-39. https://doi.org/10.4274/jpr.galenos.2019.86619

In this cross-sectional study of adolescents, more than 80% demonstrated poor sleep quality (PSQI > 5). Sleep quality declined with age and was associated with late bedtimes, inconsistent routines and electronic device use—highlighting modifiable factors.

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Dutil, C., et al. (2022). Sleep timing and health indicators in children and adolescents: A systematic review. *Sleep Medicine*, 92, 30-44. https://doi.org/10.1016/j.sleep.2022.03.030

This review found that later sleep timing in children/adolescents is linked to poorer emotional regulation, lower academic performance, shorter sleep duration, and unhealthy behaviour. The evidence quality was judged "very low," signalling need for stronger longitudinal designs.

Marino, C., Andrade, B., Campisi, S. C., et al. (2020). Association between disturbed sleep and depression in children and youths: A systematic review and meta-analysis of cohort studies. *JAMA Network Open*, 3(8), e2018783. https://doi.org/10.1001/jamanetworkopen.2020.18783

This meta-analysis of 22 prospective cohort studies (n≈28,895) found that disturbed sleep increased the odds of later depression (OR≈1.50) in children/adolescents, controlling for baseline depression. It underscores sleep disturbance as a modifiable risk factor.

Popular Scales With Sleep Items

Child Behavior Checklist (CBCL)

The CBCL includes multiple sleep-specific items such as:

- “Sleeps less than most kids”
- “Sleeps more than most kids (day and/or night)”
- “Nightmares”
- “Overtired without good reason”

These items have been validated against objective sleep measures (actigraphy, polysomnography) and correlate strongly with dedicated sleep tools like the Children’s Sleep Habits Questionnaire (CSHQ) (Becker et al., 2015; Gregory et al., 2011).

Researchers use CBCL Sleep Composite Scores to assess general sleep disturbance or as predictors of emotional and behavioral problems (Wong et al., 2022).

Popular Scales With Sleep Items

Behavior Assessment System for Children (BASC-2 / BASC-3)

The BASC includes sleep-related items embedded within the Somatization and Atypicality scales.

Items reference sleep problems, fatigue, and irregular sleep–wake behaviors.

These have shown meaningful associations with sleep-disordered breathing, ADHD, and emotional regulation (Ivanenko et al., 2004; Kim et al., 2022).

Popular Scales With Sleep Items

Conners Rating Scales (Conners-3, Conners CBRS)

While not a separate “Sleep” subscale, Conners forms include items reflecting sleep disturbance such as difficulty falling asleep or being tired during the day.

These correlate with ADHD symptoms and executive function outcomes, and are often analyzed alongside CBCL sleep items in comorbidity studies (Schneider et al., 2016).

Summary

All three, CBCL, Conners, and BASC, contain sleep-relevant items or composites that can reflect sleep disturbance, fatigue, and dysregulation, but only the CBCL has a validated sleep item composite with demonstrated convergence with actigraphy and standardized pediatric sleep measures.

Narrow Band Sleep Scales

Sleep Disturbance Scale for Children (SDSC)

Developed and validated by Bruni et al. (1996), the SDSC is one of the most established tools for assessing sleep disorders in children aged 6–16 years.

It measures six subdomains:
  Disorders of Initiating and Maintaining Sleep (DIMS)
  Sleep Breathing Disorders (SBD)
  Disorders of Arousal (DA)
  Sleep–Wake Transition Disorders (SWTD)
  Disorders of Excessive Somnolence (DOES)
  Sleep Hyperhidrosis (SHY)

45 items, parent-report, validated in multiple languages.

Excellent internal consistency (α = 0.79–0.89)

Children's Sleep Habits Questionnaire (CSHQ)

The CSHQ (Owens et al.) is a parent-report measure for children aged 4–12, covering bedtime resistance, sleep anxiety, night awakenings, parasomnias, and daytime sleepiness.

33 items, strong convergent validity with actigraphy and clinical assessment.

Widely used in both research and pediatric sleep studies.

Pediatric Sleep Questionnaire (PSQ)

Originally validated for screening obstructive sleep apnea and related daytime behaviors, the PSQ has been applied to children ages 2–18.

22–45 items depending on version, focusing on snoring, sleepiness, and inattention.

Validated against polysomnography, especially in children with obesity (Umano et al., 2022).

Pediatric Sleep Practices Questionnaire (PSPQ)

A newer self-report tool for youth ages 8–17, the PSPQ was developed by Meltzer et al. (2021).

It assesses sleep hygiene behaviors, such as bedtime regularity, technology use, and environmental factors.

25 items, self-report format, validated using actigraphy and concurrent sleep measures.

Useful for educational and behavioral intervention contexts.

Sleep Screening Questionnaire for Children and Adolescents (SSQ-CA)

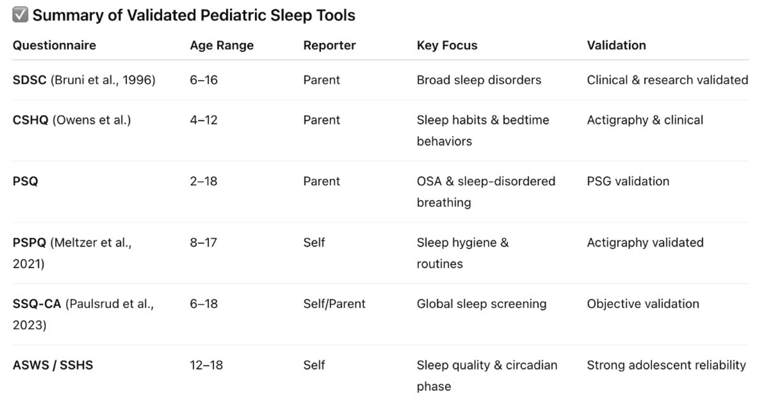
The SSQ-CA (Paulsrud et al., 2023) is a recently developed screening tool validated against objective sleep parameters (actigraphy).

Targets 6–18-year-olds, both clinical and community populations.

Demonstrates good criterion validity for detecting short sleep, delayed phase, and excessive daytime sleepiness.

Subjective Sleep Measures for Adolescents (Systematic Review)

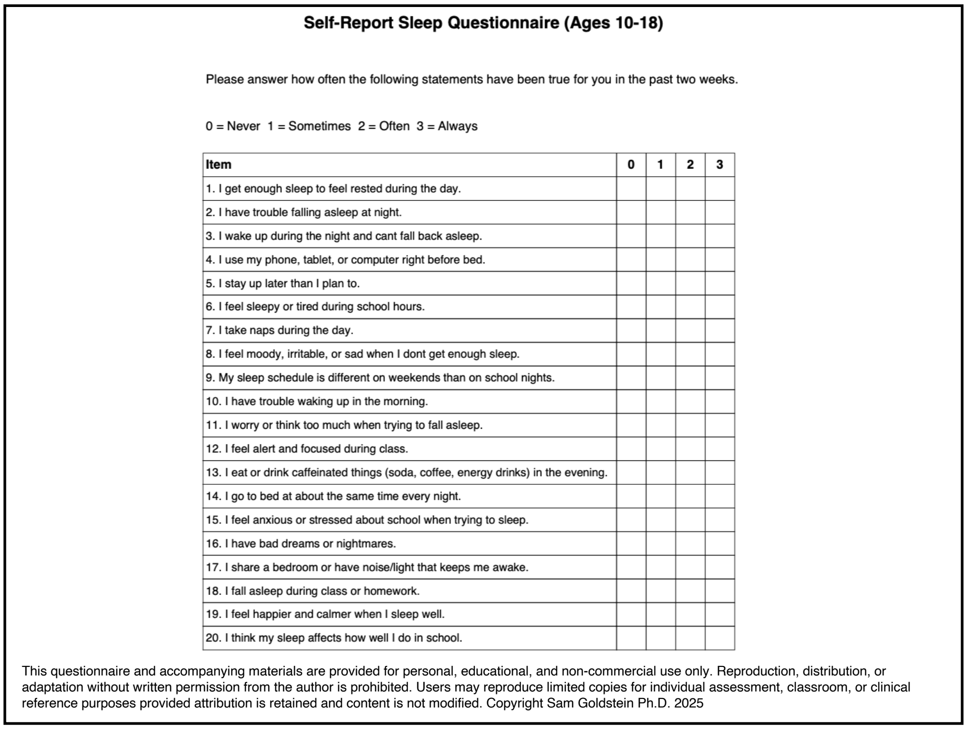
A systematic review by Ji & Liu (2016) identified 13 validated adolescent sleep questionnaires, highlighting the reliability of tools like the Adolescent Sleep–Wake Scale (ASWS) and the School Sleep Habits Survey (SSHS) for tracking sleep quality and circadian timing.



☑ **Summary of Validated Pediatric Sleep Tools**

Questionnaire	Age Range	Reporter	Key Focus	Validation
SDSC (Bruni et al., 1996)	6–16	Parent	Broad sleep disorders	Clinical & research validated
CSHQ (Owens et al.)	4–12	Parent	Sleep habits & bedtime behaviors	Actigraphy & clinical
PSQ	2–18	Parent	OSA & sleep-disordered breathing	PSG validation
PSPQ (Meltzer et al., 2021)	8–17	Self	Sleep hygiene & routines	Actigraphy validated
SSQ-CA (Paulsrud et al., 2023)	6–18	Self/Parent	Global sleep screening	Objective validation
ASWS / SSHS	12–18	Self	Sleep quality & circadian phase	Strong adolescent reliability

The Sleep Disturbance Scale for Children (SDSC)
The Children's Sleep Habits Questionnaire (CSHQ)
The Pediatric Sleep Questionnaire (PSQ)
The Pediatric Sleep Practices Questionnaire (PSPQ)
The Sleep Screening Questionnaire for Children and Adolescents (SSQ-CA)
The Adolescent Sleep–Wake Scale (ASWS)
The School Sleep Habits Survey (SSHS)
The Brief Sleep Questionnaire for Children (BSQ-C)



Self-Report Sleep Questionnaire (Ages 10-18)

Please answer how often the following statements have been true for you in the past two weeks.

0 = Never 1 = Sometimes 2 = Often 3 = Always

Item	0	1	2	3
1. I get enough sleep to feel rested during the day.				
2. I have trouble falling asleep at night.				
3. I wake up during the night and cant fall back asleep.				
4. I use my phone, tablet, or computer right before bed.				
5. I stay up later than I plan to.				
6. I feel sleepy or tired during school hours.				
7. I take naps during the day.				
8. I feel moody, irritable, or sad when I dont get enough sleep.				
9. My sleep schedule is different on weekends than on school nights.				
10. I have trouble waking up in the morning.				
11. I worry or think too much when trying to fall asleep.				
12. I feel alert and focused during class.				
13. I eat or drink caffeinated things (soda, coffee, energy drinks) in the evening.				
14. I go to bed at about the same time every night.				
15. I feel anxious or stressed about school when trying to sleep.				
16. I have bad dreams or nightmares.				
17. I share a bedroom or have noise/light that keeps me awake.				
18. I fall asleep during class or homework.				
19. I feel happier and calmer when I sleep well.				
20. I think my sleep affects how well I do in school.				

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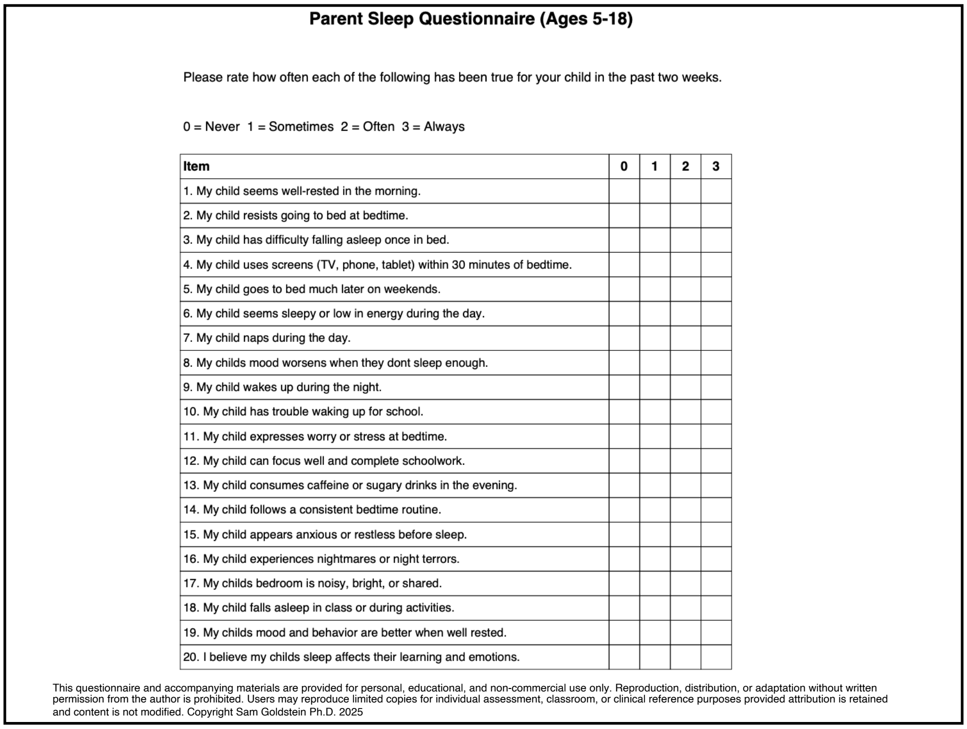

Parent Sleep Questionnaire (Ages 5-18)

Please rate how often each of the following has been true for your child in the past two weeks.

0 = Never 1 = Sometimes 2 = Often 3 = Always

Item	0	1	2	3
1. My child seems well-rested in the morning.				
2. My child resists going to bed at bedtime.				
3. My child has difficulty falling asleep once in bed.				
4. My child uses screens (TV, phone, tablet) within 30 minutes of bedtime.				
5. My child goes to bed much later on weekends.				
6. My child seems sleepy or low in energy during the day.				
7. My child naps during the day.				
8. My childs mood worsens when they dont sleep enough.				
9. My child wakes up during the night.				
10. My child has trouble waking up for school.				
11. My child expresses worry or stress at bedtime.				
12. My child can focus well and complete schoolwork.				
13. My child consumes caffeine or sugary drinks in the evening.				
14. My child follows a consistent bedtime routine.				
15. My child appears anxious or restless before sleep.				
16. My child experiences nightmares or night terrors.				
17. My childs bedroom is noisy, bright, or shared.				
18. My child falls asleep in class or during activities.				
19. My childs mood and behavior are better when well rested.				
20. I believe my childs sleep affects their learning and emotions.				

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Sleep Questionnaire Scoring and Interpretation Guide

This guide applies to both the Self-Report Sleep Questionnaire (Ages 10-18) and the Parent Sleep Questionnaire (Ages 5-18). Each item is rated on a 4-point Likert scale:

0 = Never 1 = Sometimes 2 = Often 3 = Always

Five items are reverse-scored because they represent positive sleep behaviors:

- Self-report: Items 1, 12, 14, 19, 20
- Parent-report: Items 1, 12, 14, 19, 20

To calculate the total score:

1. Reverse the scores for the positive items (0->3, 1->2, 2->1, 3->0).
2. Sum all item scores to obtain a total between 0 and 60.
3. Higher total scores indicate greater sleep disturbance or poorer sleep quality.

Score Interpretation

Use the following general interpretation bands:

0-15: Typical sleep pattern (No significant concerns)

Child or adolescent shows adequate sleep duration, quality, and regularity.

16-30: Mild sleep disturbance (Monitor)

Occasional difficulty falling asleep, inconsistent schedules, or mild fatigue; consider basic sleep hygiene support.

31-45: Moderate sleep disturbance (Intervention recommended)

Frequent sleep issues affecting daytime functioning, mood, or learning. Suggest behavioral or environmental interventions.

46-60: Severe sleep disturbance (Clinical concern)

Persistent, severe problems likely affecting health and behavior. Recommend comprehensive assessment for sleep disorder or mental health comorbidity.

Optional Subscale Scoring

You may calculate subscale scores for more detailed analysis. Sum the items within each domain:

1. Sleep Duration and Consistency: Items 1, 5, 9, 10, 14
2. Sleep Quality: Items 2, 3, 6, 8, 15, 16
3. Environmental and Behavioral Factors: Items 4, 13, 17
4. Cognitive/Mood Functioning: Items 11, 12, 18, 19, 20

Subscale analysis can help identify whether the main issue is physiological, environmental, or behavioral in nature.

Note: This questionnaire is designed for educational and screening purposes. It is not a diagnostic tool. High scores should prompt further evaluation by a pediatrician, psychologist, or sleep specialist. This questionnaire and accompanying materials are provided for personal, educational, and non-commercial use only. Reproduction, distribution, or adaptation without written permission from the author is prohibited. Users may reproduce limited copies for individual assessment, classroom, or clinical reference purposes provided attribution is retained and content is not modified. Copyright Sam Goldstein Ph.D. 2025

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Major Classes of Medications for Sleep

Class / Mechanism	Examples	Typical use / notes
"Z-drugs" (non-benzodiazepine hypnotics)	Zolpidem (brand: Ambien, Edluar, Zolpimist), Eszopiclone (Lunesta), Zaleplon (Sonata)	Help with sleep onset (and sometimes maintenance). Risk of tolerance, dependence. American Academy of Family Physicians+1
Benzodiazepines	Temazepam (Restoril), Triazolam (Halcion)	Older sedative-hypnotics; higher risk of dependence, rebound insomnia. Mayo Clinic+1
Orexin (hypocretin) receptor antagonists	Suvorexant (Belsomra), Lemborexant (Dayvigo), Daridorexant (Quviviq)	Help regulate wakefulness; newer class. Mayo Clinic
Melatonin receptor agonists	Ramelteon (Rozerem)	Mimics melatonin effect, for sleep-onset difficulties, less dependence risk. Mayo Clinic
Low-dose sedating antidepressants / off-label use	Doxepin (Silenor – low dose for sleep), Trazodone (off-label for insomnia), Amitriptyline (off-label)	Useful when insomnia co-occurs with depression/anxiety; sedating side-effect exploited. NCBI+1

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Major Classes of Medications for Sleep

- These medications are **not** the first line for chronic insomnia. Often recommended: sleep hygiene improvements, cognitive behavioral therapy for insomnia (CBT-I), addressing underlying causes (e.g., pain, sleep apnea, mental health) before or alongside medication. Many of these medications carry risks: next-day drowsiness, falls (especially older adults), memory issues, potential dependence/withdrawal, drug interactions.
- Some medications listed here are being used “off-label” (i.e., not specifically approved for insomnia but used because of their sedating effect) — meaning less robust evidence for that particular use.
- Medical conditions such as pregnancy, liver/kidney disease, older age, obstructive sleep apnea, should prompt special caution and consultation with a healthcare provider.
- Do not start or stop any of these without guidance from a medical professional. The choice of drug, dose, timing, duration, and monitoring depend heavily on the individual’s medical history, the type of sleep problem (onset vs maintenance vs early awakening), underlying causes, and other medications.
- This list is not complete; there are many additional drugs and combinations that might be used, especially off-label.

Major Classes of Activities for Sleep

1. **Keep a consistent sleep schedule:** same bedtime and wake time daily.
2. **Follow a calming bedtime routine:** reading, stretching, or gentle yoga.
3. **Avoid screens and bright lights** for 1 hour before bed.
4. **Exercise regularly:** morning or afternoon is best.
5. **Avoid caffeine and heavy meals** close to bedtime.
6. **Keep your bedroom dark, cool, and quiet.**
7. **Get natural sunlight** in the morning to reset your body clock.
8. **Use relaxation techniques:** deep breathing, meditation, or mindfulness.
9. **Reserve your bed for sleep only:** no phones, play, TV, or work.
10. **If you can’t sleep, get up** and do something relaxing until you feel sleepy.

Raising Rested Kids
Fixing the Sleep Crisis in Children and Teens

A Call To Action

Fixing the Sleep Crisis in Children and Teens

- **Make school start times align with biology.**
  Adolescents are biologically wired to fall asleep later and wake later. Forcing early start times deprives them of essential sleep. School districts must adopt later start times for middle and high schools. This is one of the most evidence-backed and scalable interventions available.
- **Treat sleep as a core component of child health.**
  Doctors, schools, and parents must stop treating sleep as secondary to diet, exercise, or academics. Sleep screening should be standard in pediatric visits, with clear benchmarks by age. Pediatricians must be trained to assess and treat sleep issues like any other developmental concern.
- **Launch national sleep education campaigns.**
  Parents need practical guidance, not scare tactics, on establishing sleep routines, managing screen use, and understanding sleep needs at each developmental stage. Schools should include sleep education in health curricula starting in elementary grades.

A Call To Action

Fixing the Sleep Crisis in Children and Teens

- **Regulate screen time and nighttime tech use.**
  Devices in bedrooms are a major sleep disruptor. Parents and schools must enforce digital curfews, encourage unplugged evenings, and provide tech-free sleep environments. Policy-level initiatives should address the marketing of sleep-disrupting technologies to children.
- **Provide sleep support in mental health care.**
  Every teen in therapy for depression, anxiety, or attention issues should be screened for sleep disorders. Cognitive Behavioral Therapy for Insomnia (CBT-I) and other sleep-focused treatments should be integrated into youth mental health programs.
- **Invest in sleep-friendly environments for low-income families.**
  Sleep quality is shaped by noise, crowding, and stress. Community programs and housing initiatives should recognize that improving sleep environments—safe spaces, consistent routines, less chaos—is foundational for kids' success in school and life.
- **Shift cultural norms around sleep.**
  We need to stop glorifying overwork and exhaustion—especially in teens. Youth should not be praised for staying up to study or sacrificing sleep for sports. Culturally, we must reframe sleep as strength, not weakness.

“Raising Rested Kids: Helping Children Build Healthy Sleep Habits”

GOALS:

1. Educate parents on the importance of healthy sleep for child development.
2. Identify common causes of sleep problems in children.
3. Share practical strategies to improve children's sleep.
4. Encourage consistency and mindfulness in bedtime routines.
5. Promote healthy digital, environmental, and behavioral sleep hygiene.

“Raising Rested Kids: Helping Children Build Healthy Sleep Habits”

Why Sleep Matters More Than You Think

Overview of sleep's role in brain development, mood regulation, and learning.

Consequences of poor sleep: irritability, attention issues, academic problems.

Age-specific sleep needs (e.g., preschoolers need 10–13 hrs, teens ~8–10 hrs).

“Raising Rested Kids: Helping Children Build Healthy Sleep Habits”

What’s Stealing Your Child’s Sleep?

Identify common sleep disruptors:

- Screens before bed
- Irregular routines
- Caffeine/sugar intake
- Anxiety or overstimulation

Role of parents’ schedules and environment

“Raising Rested Kids: Helping Children Build Healthy Sleep Habits”

Bedtime Routines That Actually Work

- Establishing consistent, calming bedtime rituals:
  - Same time every night
  - Wind-down activities (books, bath, dim lights)
  - Avoiding screen time 1 hour before bed
- Sample 30-minute bedtime routine structure

“Raising Rested Kids: Helping Children Build Healthy Sleep Habits”

Designing a Sleep-Friendly Environment

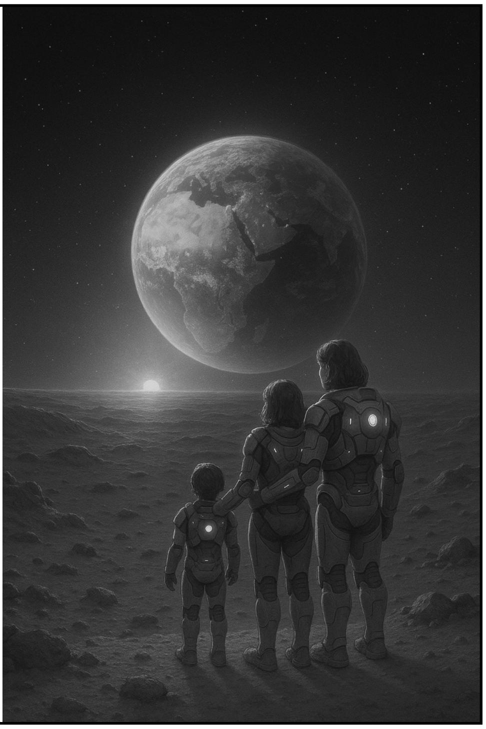
- Tips for ideal sleep settings:
  - Cool, dark, quiet room
  - No TV in the bedroom
  - White noise or calming music
  - Comfortable bed and pajamas

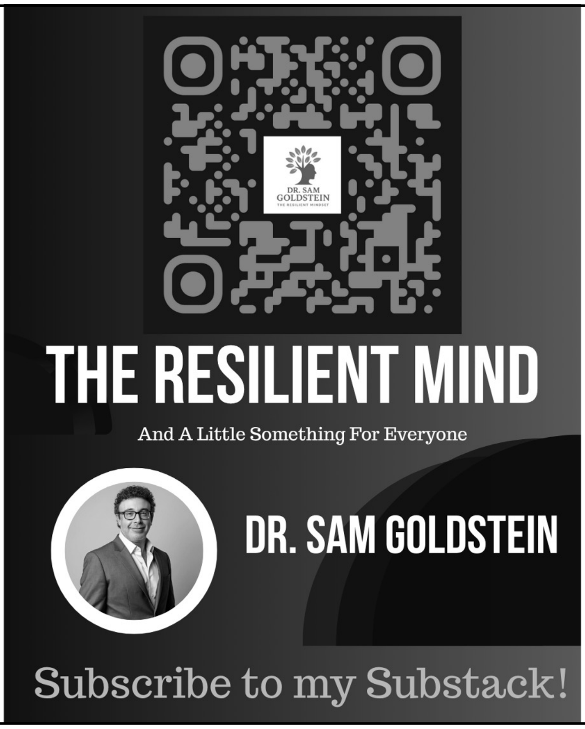
“Raising Rested Kids: Helping Children Build Healthy Sleep Habits”

Consistency is Key: Troubleshooting & Tips

- What to do when routines are broken (e.g., travel, illness)
- Handling bedtime resistance or night wakings
- Using reward charts or sleep diaries
- When to talk to a pediatrician (sleep apnea, night terrors)

Sleep isn’t a luxury. It’s the foundation of brain development, emotional regulation, learning, and long-term health. If we care about the future of children and teens, we can’t keep letting them run on empty. Sleep must be taken seriously, at home, in schools, and in policy.

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Questions?

Thank You!

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