



Infant Mental Health

Behavioral Sleep Strategies - Media Conference

Trainee Guide

Contributors

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Overview

Popular media frequently touches on issues germane to reproductive psychiatry. The ability to field patient questions arising from popular culture is an important professional skill for trainees. In particular, trainees should be able to explain data and statistics cited in the lay media in an accurate, understandable, and clinically relevant manner. Thus, the goal of this module is to have trainees build communication skills that enable them to serve as knowledgeable and thoughtful representatives of reproductive mental health to a lay audience.

This session consists of three parts:

1. Reviewing and critiquing two pieces on sleep training from popular media
2. Appraising the comparable medical literature
3. Role-playing a provider/patient interaction that allows for practice communicating on this topic

The aim of reviewing the medical literature is to compare peer-reviewed findings with the information portrayed in the media. For this exercise, the most relevant parts of medical literature are the abstract, the introduction, and the discussion. The aim is not to have an in-depth, “journal-club” analysis of the article (an important skill for trainees to master elsewhere in their training), but to identify the gaps between the information presented by the media compared with medical literature.

Sessions last approximately 50 minutes, but can be modified depending on the number of media items and articles selected. The media conference is designed for PGY-4 psychiatry residents, but can be tailored to any mental health trainee. A small group setting with time and space to work within break-out format is recommended. After a review of the media items and the medical literature, the group will divide up into small groups of 2-3 trainees to role-play the clinical interaction.

Learning Objectives

By the end of this module, participants will be able to:

1. Demonstrate the ability to analyze issues related to behavioral sleep strategies as portrayed in the lay media
2. Locate and analyze relevant scientific literature as it relates to the issues of behavioral sleep strategies
3. Communicate thoughtfully and accurately with a lay audience (e.g. a patient in a reproductive mental health consultation)

Resources Required

1. A facilitator
2. Samples from media
3. Relevant article references
4. Laptop (with internet access) and projector

Session Structure

1. Presentation of media items (10 minutes): Facilitator and trainees together will review the media items
2. Large group reflection after watching the media items (5 minutes)
3. Review of medical literature (10 minutes): Facilitator and trainees together will briefly assess the comparable medical literature using a structured format
4. Role-play with case example (10 minutes): Small groups of trainees will role-play a provider/patient discussion.
5. Large group discussion (10 minutes)
6. Wrap-up and Q+A (5 minutes)

Presentation of Media Items:

1. “Why the Cry it out Method Harms Our Children” (3 minutes, 20 seconds)

[Why the Cry it out Method Harms our Children Video](#)

2. “New Research says ‘Cry it out’ Baby Sleep Method doesn’t harm children” (2 minutes, 49 seconds)

<https://www.today.com/parents/new-research-says-cry-it-out-baby-sleep-method-doesn-t94271>

Critique of Media Pieces

1. What is the central claim of each of these video clips and why may they be problematic? What points or information are missing from each clip? How might each video play into fears that parents may have?

2. How do you help parents understand this if they came in with this media clip?

3. Please self-reflect on your own biases.

Review of medical literature

Source material for media article: <https://link.springer.com/article/10.1007/s00737-022-01224-w>

1. What is the study design? What were the study variables? What were the main conclusions? What are the limitations of this study?

2. How are the main conclusions drawn from the study different from the videos?

Role-Play with Case Example

Trainees should separate into groups of 2 or 3 with one trainee playing the role of reproductive mental health clinician and one or two trainees playing the role of a patient who is experiencing distress.

Sample Clinical Case

Tina is a 32-year-old with a history of GAD well-controlled on escitalopram 10 mg for years who gave birth to her first child, a healthy full-term baby, 6 months ago. Her infant has been doing well at pediatric check-ups thus far, gaining weight and growing appropriately on an exclusively breast milk diet. Tina returned to work three months ago and has been taking pump breaks to keep up her milk supply throughout the day. She notices that no matter what she does, she has been exhausted since her infant's birth. Her baby continues to wake up 3-4 times each night, and Tina feels she never gets a good night of sleep anymore. She wonders if there is a way to get her baby on a sleep schedule so she can start sleeping through the night and feel better rested during the day. She's talked with some of her friends at work, but they have all had varying opinions so she decides to bring this up at her next mental health appointment.

Tina: "I've been exhausted for the past 5 months. My baby continues to wake up at least 3 times per night and then it takes me another 30 minutes to put her down each time. I'm having a really hard time getting through the workday without taking a nap in the middle. I've heard about the "cry it out" method and talked to some of my friends that have kids, but I'm now more confused than ever about what to do since one of my friends told me it causes long-term problems with attachment! What do you recommend?"

Sample reproductive mental health clinician script

Since your infant is 6 months-old and growing well, it does sound like she is ready to space out night time feedings and could potentially sleep longer stretches. Every mother has to decide for herself what is best for her and her baby. There are also a lot of different behavioral sleep interventions apart from simply "cry it out." A recent study (by Blunden, Osborne, and King (2022)) showed that when mothers are allowed to respond verbally to their infants and gradually decrease physical cues, this can be effective with less stress for the mother. It ultimately comes down to balancing what your sleep needs are and what behavioral strategies feel like the right fit for you and your baby— you are the person who will know what is best, and those needs may be very different than those of your friends.

Patient then asks a series of questions:

Q: What if I wanted to try the “cry it out” method? What should I know?

A: American Academy of Pediatrics recommends a gradual method that you can start some time between 4-6 months. You would let the baby cry for 2 minutes before answering, gradually increasing the length of time every few nights before responding. You may see results within the week, though each infant will respond differently.

Q: Will this cause long-relationship issues between me and my baby?

A: There is no evidence to support adverse stress responses or long-term effects on caregiver-child attachment using this gradual method, though we are still learning about infant sleep. Ultimately, we know that if your baby’s disrupted sleep causes a lot of disruption for her caregivers (like constant exhaustion that can lead to lower mood, higher anxiety, or irritability, etc) that won’t be good for your relationship with your baby. It might then be important to find a way to sleep train your baby or seek more support at night.

Q: Is it okay if I stop this if it doesn’t work or if it’s too distressing?

A: Absolutely, no two children are the same, and YOU can read your child’s cues and know what’s best for you and your child. Different babies and parents will respond to this differently. It’s important to know this may be really difficult – if you feel better holding and comforting your baby, you should certainly do that.

Q: What else would you recommend in terms of helping my baby (and me) get the best possible sleep?

A: Routine can be very helpful- establish a nighttime routine that is soothing to both you and your baby (ie bath, massage, dress, read, sing), and includes going to bed at the same time every night. Put your child in their crib when they are sleepy but not yet asleep so they can learn to fall asleep on their own. Create an environment for both of you that is conducive to sleeping and practices good sleep hygiene: no electronics, dark room, white noise, comfortable temperature. Think about the support people in your life- could you come up with a plan to share or offload the nighttime care? Might it be possible to take shifts with another adult in the home so that you can try to get a 4 hour sleep interval?

Q+A: Large Group Discussion

Additional Resources

Glossary of Sleep Training Terms

Extinction methods are based on principles of **operant conditioning** in which unwanted behaviors (for example, disruptive sleep and night-time crying) are extinguished by ignoring the undesirable behaviors and eliminating the ‘reward’ component (parental attention) to encourage self-soothing. Extinction methods withdraw parental assistance either immediately and completely (“cry it out”), more gradually (“controlled crying”) or very gradually (Meltzer et al. 2014).

Unmodified extinction (also known as “**cry it out**”)

- Can occur *with or without caregiver presence*
- Caregiver provides a normal bedtime routine, puts the baby to sleep, then leaves the room without checks until a set time the next morning. Behaviors are ignored unless there is a concern that the infant is hurt or sick. Depending on the age and temperament of the child, caregiver may enter to soothe the child. However, if this results in increased wakefulness and stimulation of the child, the caregiver is advised not to re-enter.
- Caregiver may remain in the room but ignore the child
- **Fading**, also known as **faded bedtime** or **camping out**, is a variant of this method in which caregiver presence is gradually withdrawn from the child’s room during sleep. The caregiver may stay in the room to comfort the child as he or she falls asleep. With each consecutive night, the caregiver moves further and further from the crib. Typically, the parent should not pick up or engage the infant, but just offer reassurance provided with voice and perhaps a loving pat for a few minutes.

Graduated extinction (also known as “**controlled crying**”)

- Bedtime routines are completed, then infants are placed in the crib drowsy but awake.
- The goal is to strengthen cues for sleep in the bed and bedroom and weaken cues that interfere with falling asleep.
- **Ferber method** is an example, with a progressive checking-in schedule that starts at 3 minutes, then 5 minutes, then 10 minutes, with longer intervals between each visit over the course of the week. The purpose is to allow the infant to know the caregiver is nearby but also to reassure the caregiver that the baby is fine.

Scheduled Awakenings

- Caregiver preemptively awakens child 15 to 30 minutes prior to typical spontaneous awakening and provides usual responses (rocking, feeding, soothing) with the goal of fading them out by increasing the time span between each scheduled awakening.

Faded Bedtime (also known as **positive routines**)

- Faded bedtime Involves temporarily delaying bedtime to more closely coincide with the child’s natural sleep onset time, then fading it earlier as the child gains success falling asleep quickly. Parents develop a set bedtime routine involving enjoyable and quiet activities leading up to sleep onset.
- Relies on stimulus control: the goal is to strengthen the cues for sleep in the bed and bedroom and weaken cues that interfere with falling asleep.

Gentle and no-cry methods

- May take longer but may feel easier/more acceptable to parents
- Parents should be aware that some amount of crying may occur as the child responds to change.
- Examples:
 - Pick up, put down approach: the baby is picked up when she cries and then placed back into the crib as soon as she is comforted. Caregiver then leaves the room. The process is continued until the baby is settled.
 - “Camping out”: caregiver presence is gradually withdrawn from the child’s room during sleep (overlaps with faded bedtime).
 - Sears et al., is an example of “attachment parenting”; he recommends shared sleeping spaces, creating positive sleep conditions, and varying your techniques at night (ie, one night rocking or nursing to sleep, another night singing to sleep, switching off with partner to put infant to bed).

Caregivers should be counseled that any sleep disruption may require retraining, including travel, milestones, or illness. Also, many infants may respond to sleep training with changes in appetite, clinginess, crankiness, crying, drowsiness, or resistance to daytime naps.

Although there is research demonstrating that decreased total sleep duration is associated with both physical and mental health concerns in childhood, there are mixed results regarding uninterrupted sleep and development. Given the lack of consensus, the decision to sleep train is often a personal one for many families (Lui, 2020). Early self-soothing has not shown to be related to later independence and no studies to date have linked infant “independence” with independence at later ages (Barry, 2021).

What is Normal Infant Sleep?

The American Academy of Pediatrics endorses the consensus statement of the American Academy of Sleep Medicine (AASM) regarding sleep duration required on a regular basis for optimal health. The recommended number of hours for infants aged 4 months to 12 months is 12 to 16 hours.

Infants have different EEG patterns than adults, including active sleep (analogous to REM sleep in adults), quiet sleep (analogous to slow-wave sleep in adults), and an unclassified type of sleep that is not analogous to any type of adult sleep. Full-term infants spend about 50% of total sleep time in active sleep. Each cycle lasts about 50 to 60 minutes. Given the shorter sleep cycles, infants are more easily interrupted during sleep. Newborn infants can fall directly into active sleep, which can continue to around age 3 months. Gross limb movements, sucking motions, and smiling occur during active sleep as opposed to the REM sleep muscle paralysis in older children. At age 4 to 6 months, most babies are on a regular sleep/wake cycle with sleep onset beginning to occur during NREM sleep by age 6 months. As the central nervous system matures, total sleep duration and proportion of REM sleep decreases, and the REM/NREM cycle lengthens. Infants spend about 17 hours per day asleep at birth, distributed throughout the day and nighttime hours; by one year infants’ sleep is reduced to about 14.5 hours, most occurring at night (Liu, 2020).

Many factors can affect circadian rhythm, including light exposure, ambient temperature, mealtimes, physical activity, and bedtime routines. The homeostatic process involves the sleep debt that is accumulated during waking hours that leads to the need for sleep.

Pediatric sleep “problems” are universal with parents in all cultures reporting some level of problematic sleep behaviors. However, there is no universally agreed-upon definition of what constitutes optimal sleep for preterm or full-term infants. The idea that ideal infant sleep is characterized by independent sleep onset, longer consolidated sleep periods, self-soothing at night and more sleep per sleep-wake cycle comes from Western cultural assumptions of “normal” infant sleep.

Infant sleep is moderated by many factors that affect research findings, including feeding (breastmilk vs. formula), solitary sleeping vs. cosleeping, sociocultural norms and expectations, infant temperament and caregiver factors (for example, the presence of maternal depression in the perinatal period) and socioeconomic differences within countries/cultures.

Sociocultural influences

Cross-cultural studies highlight important differences in how cultural beliefs and values influence infant sleeping practices. For example, U.S. culture is highly independent and individualistic (Kitayama et al., 2010), making children's "independence" one of the most important goals for parents (Keller & Goldberg, 2004). In the United States and other Western, industrialized, educated, rich and democratic nations, infants are believed to be born dependent with the need to develop independence as early as possible (beginning in infancy), in preparation for later life (Morelli et al., 1992). In other cultures, infants are believed to be born independent and must be socialized within the family to interdependence (McKenna et al., 2007). For example, Japanese parents view small children sleeping alone as rather "merciless," while Mayan mothers equate solitary sleeping for infants as a form of child neglect (Morelli et al., 1992). In China, parents view solitary sleeping for infants as "unkind," considering the sensory-rich nighttime co-sleeping environment important for infant security, family intimacy, and long-term emotional development (Huang et al., 2010).

There is often a disconnect in U.S. families where parents may expect their infant's sleep patterns to match their own as early in life as possible, and this does not reflect the reality of human infants' need to wake during the night for nutrition (especially those who are breastfed), or for other reasons (Barry, 2021).

Cosleeping

Sleep location (solitary vs. cosleeping) influences how infants sleep. Health policy experts in the U.S. strongly recommend against any cosleeping (i.e. sharing a bed surface) because it is associated with higher rates of SIDS (American Academy of Pediatrics Task Force on Sudden Infant Death Syndrome, 2011). Other researchers disagree, finding that in the absence of other risk factors (i.e., smoking, formula-feeding, unsafe sleep surface), SIDS rates are no higher for cosleeping infants than for other infants (e.g., Blair et al., 2009, 2014; Mitchell et al., 2017). In Western, industrialized nations, cosleeping is increasing after over a 100 years of decline. Cosleeping is the normal, accepted pattern of nighttime behavior in most cultures of the world (estimated at 70%).

The American Academy of Pediatrics notes that the risk of SIDS is reduced by 50% when the infant shares a room with the parent. This may be related to maternal-infant synchrony, which is "characterized by adaptive and reciprocal behaviors that promote a mutually rewarding interaction (Reyna et al., 2009)." After birth, the infant must adapt to the external environment and transition to biological independence, in part through continued maternal-infant sensory exchanges (Winberg, 2005). Mosko et al. (1997) identified that carbon dioxide exchange between mothers and cosleeping infants was at very low levels. Rather than acting as a risk factor for SIDS at these levels, it served to stimulate infant breathing and actually increased breathing stability and healthy infant respiratory development.

Feeding

Currently, emphasis on infant nutrition in the West and worldwide has returned to breastfeeding. Breastfed infants sleep differently than formula-fed infants. Research findings have been inconclusive because studies use very different ages with different results. Some studies find that formula-fed infants sleep more than breastfed infants (Huang et al., 2015), while others show infants who breastfeed do not necessarily get less sleep than formula-fed infants (Barry 2021). Providing formula to reduce night waking has not been shown to improve infant sleep (Doan et al., 2007; Montgomery-Downs et al., 2010). Breastfed babies awake more often and are more easily arousable than babies fed formula, and this may be one reason that breastfed babies are at lower risk of SIDS than babies fed

formula (Bartick et al., 2018; McKenna & McDade, 2005). Human breastmilk requires more frequent feeding than formula. In the first 8 to 12 weeks of life, human infants must wake every 2 to 3 hours to nurse in order to maintain their rapid growth rate of body and brain. Frequent feeding, especially at night, also helps nursing mothers to establish and maintain their milk supply. Prolactin, which increases human milk production, is in its highest concentration in breastmilk during the night, encouraging nighttime feedings (Cregan et al., 2002).

Socioeconomic Factors

Within cultures, different factors can influence family decisions around infant sleep, such as minority status, education, and socioeconomic status (SES). In the U.S., Black families are more likely than White families to cosleep, regardless of SES. Chronic stress in marginalized populations creates real health disparities, including disparities in pregnancy and birth outcomes and infant health. Such health disparities worsen some outcomes and are also related to SIDS.

Parental leave policies have been found to play a role in infant sleep, parental sleep, parenting stress and perception of infant sleep.

References

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