

PARENTING SKILLS

Parenting and Sleeping Problems and Universal Parenting Programs

Harriet Hiscock, MBBS, FRACP, MD

Centre for Community Child Health, The Royal Children's Hospital, Murdoch Childrens Research Institute, and Department of Paediatrics, University of Melbourne, Australia

December 2014

Introduction

Sleep problems in infants and children are common and typically include problems going to sleep and problems maintaining sleep. Sleep problems can be further divided into medical (e.g., obstructive sleep apnea) and behavioural problems. Parenting often plays a role in the development and maintenance of behavioural problems. This review therefore focuses on behavioural sleep problems, how parenting may perpetuate or reduce such problems, and the role of universal parenting programs in the prevention of behavioural sleep problems.

Subject

Before understanding how parenting may give rise to sleep problems, we first need to understand normal sleep. Infants and children (like adults) pass from consciousness into non-Rapid Eye Movement (NREM) or deep sleep, then into REM or light sleep, and back into NREM sleep, several times per night. These phases are known as 'sleep cycles' and last 20- 50 minutes in infants and children and 90 minutes in adults. A child can wake fully from light sleep and either self-settle

back to sleep or signal (i.e., call out) to their parent. The way an infant or child is settled to sleep at the start of the night often dictates how they re-settle after naturally waking overnight. Thus if the last thing a child remembers is being fed, having a pacifier, or being rocked to sleep, upon waking they will call out for a parent to come and feed them, replace their pacifier, or rock them before returning to sleep once more. These actions are known as "parent-dependent" sleep cues.

Problems

How a parent settles their child to sleep and responds to night waking is key to development and thus management of behavioural sleep problems.² A 'coercion trap' can occur whereby a parent rocks their child to sleep, their child wakes some hours later and calls out, the parent returns to rock their child, the child goes back to sleep (thereby reinforcing the parent's response) but wakes again and wants to be rocked.¹ This can lead to parental fatigue and depression as well as inadequate and fragmented sleep for the child.^{3,4}

Research Context

Teaching parents to allow their infant or child to self-settle at the start of the night can greatly improve problems getting to sleep and re-settling over night. Randomized controlled trials have demonstrated that teaching parents to use graduated extinction (i.e., parent checks on and comforts their infant at increasing time intervals but leaves the room before the infant falls asleep) or adult fading (i.e., a parent places a camp bed or chair next to their infant's cot, pats their infant to sleep for the first few nights, then gradually moves their camp bed or chair out of the infant's bedroom over a period of weeks) reduces both infant sleep problems and maternal depression symptoms.⁵ In toddlers, provision of a bedtime routine by parents has also been shown to reduce sleep problems.⁶

Key Research Questions

What is less clear however, is whether (i) parenting can be modified to prevent sleep problems arising; (ii) if so, which parenting practices are best to modify; and (iii) if there is a subgroup(s) of infants who respond better to prevention.

Recent Research Results

A number of randomised trials have evaluated programs aimed at preventing infant sleep problems. Most have included a range of parenting education and strategies, making it difficult to

establish if some strategies lead to better outcomes than others. Most interventions have included parent education about normal sleep and sleep cycles, advice to maximise environmental differences between day and night, and strategies to encourage infant self-settling.⁷⁻¹⁰ Strategies included range from the graduated extinction method described above to encouraging parents to stretch night time feed intervals (in the hope that the infant will self-settle) and encouraging the use of parent-independent sleep cues. These trials have shown modest improvements in infant sleep and maternal depression symptoms. Two of these trials have been shown to be most effective in a subgroup of infants who feed less than 3 hourly.^{9,11} Why this is so is unclear but it may be that these infants are more unsettled and are thus fed to sleep more frequently in the hope of improving their sleep. Teaching parents not to feed their infant to sleep and encourage self-settling instead may reduce development of later sleep problems in this subgroup.

Research Gaps

While modifying parenting to manage and even prevent sleep problems appears effective, a number of research questions remain unanswered. Popular public discourse promotes 'attachment' parenting whereby an infant is fed on demand, held for prolonged periods of time and co-sleeps with their parent. Such parenting has been associated with increased night waking at 12 weeks but effects beyond this are less clear. While the parenting strategies evaluated in randomized trials are effective, their short- to medium-term effects on infant well-being as measured by biological markers (e.g., cortisol) are unclear. Fathers are now playing an increasing role in caring for infants and children but their unique contribution to the development and maintenance of sleep problems has not been studied. Finally, parenting strategies work for many but not all children and future research is needed to determine how best to help children whose sleep does not improve with traditional parenting strategies.

Conclusions

Behavioural sleep problems are common in infants and children and their development and maintenance is mediated, in part, by parenting. How a parent settles their child to sleep appears crucial and teaching parents strategies to encourage infant self-settling and implement a bedtime routine appear beneficial. Preventing infant sleep problems through universal programs has a more modest benefit and subgroups of infants (e.g., those feeding less than 3 hourly) may experience a greater benefit. Future research needs to explore the outcomes of attachment-based parenting, impacts of parent-led behavioural strategies on infant well-being, role of fathers, and

alternative approaches for infants who do not respond to behavioural parenting practices.

Implications for Parents, Services and Policy

Managing sleep problems in infants and children is exhausting for parents, challenging for clinicians and costly for policy makers. Universal prevention programs providing consistent advice to parents about normal sleep patterns, sleep cues, and ways to encourage infant self-settling (after the first few months) should be widely available. Such programs could be incorporated into well child, universal services and take advantage of the content in evidence-based websites such as www.raisingchildren.net.au and http://purplecrying.info/. Once sleep problems are established, parents need support from a trusted health professional to manage the sleep problem. Parents should be offered a range of evidence-based strategies and choose the best one(s) for their child and their family. Online interventions offering such support look promising and have potential to increase reach and uptake.¹³ Offering advice to parents to take up a more attachment-based parenting style should be tempered by the lack of rigorous data on the effectiveness of this approach to respond to unsettled infant behaviour.¹⁴

References

- 1. Karyn G. France and Neville M. Blampied. Infant sleep disturbance: Description of a problem behaviour process. *Sleep Medicine Reviews* 1999;3(4): 265–280.
- 2. Avi Sadeh, Liat Tikotzky, Anat Scher. Parenting and infant sleep. Sleep Medicine Reviews 2010;14(2):89-96.
- 3. Hiscock H, Wake M. Infant sleep problems and postnatal depression: a community-based study. *Pediatrics* 2001;107(6):1317-1322.
- 4. Giallo R, Rose N, Vittorino R. Fatigue, wellbeing and parenting in mothers of infants and toddlers with sleep problems. *J Reproductive and Infant Psychol* 2011; 29(3):236-249.
- 5. Hiscock H, Bayer J, Gold L, Hampton A, Ukoumunne OC, Wake M. Improving infant sleep and maternal mental health: a cluster randomised trial. *Arch Dis Child* 2007;92:952-958.
- 6. Mindell JA, Telofski LS, Wiegand B, Kurtz ES. A nightly bedtime routine: impact on sleep in young children and maternal mood. *Sleep* 2009;32(5):599-606.
- 7. St James-Roberts I, Sleep J, Morris S, Owen C, Gillham P. Use of a behavioral program in the first 3 months to prevent infant crying and sleeping problems. *J Paediatrics and Child Health* 2001;37:289–297.
- 8. Symon BG, Marley JE, Martin AJ, Norman ER. Effect of a consultation teaching behavior modification on sleep performance in infants: a randomized controlled trial. *Med J Aust.* 2005;182(5):215–218.
- 9. Hiscock H, Cook F, Bayer J, Le HND, Mensah F, Cann W, Symon B, St James Roberts I. Preventing early infant sleep and crying problems and postnatal depression: A randomized trial. *Pediatrics* 2014 Feb;133(2):e346-354. doi: 10.1542/peds.2013-1886. Epub 2014 Jan 6.
- 10. Pinilla T, Birch L. Help me make it through the night: Behavioral entrainment breast-fed infants' sleep patterns. *Pediatrics* 1993;91:436-44.

- 11. Nikolopoulou M, St James-Roberts I. Preventing sleeping problems in infants who are at risk of developing them. *Arch Dis Child.* 2003;88:108–11.
- 12. St James-Roberts I, Alvarez M, Csipke E, Abramsky T, Goodwin J, Sorgenfrei E. Infant crying and sleeping in London, Copenhagen and when parents adopt a "proximal" form of care. *Pediatrics* 2006;117(6):1146-55.
- 13. Mindell, JA, Du Mond, CE, Sadeh, A, Telofski, LS, Kulkarni, N, & Gunn, E. Efficacy of an internet-based intervention for infant and toddler sleep disturbances. *Sleep* 2011;34(4):451.
- 14. Fisher J, Rowe H, Hiscock H, Jordan B, Bayer J, Colahan A, Amery V. Understanding and responding to unsettled infant behaviour. A Discussion paper for the Australian Research Alliance for Children and Youth. 2011. Available at: http://www.aracy.org.au/publications-resources/area?command=record&id=123&cid=6. Last accessed December 4, 2014.