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Family Functioning and Children's Sleep

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Abstract

Sleep is a pivotal correlate and predictor of many domains of child development, including socioemotional adjustment, physical health, and cognitive functioning. The family plays a major role in shaping children's sleep–wake behaviors, and developmental research on children's sleep in a family context is on the rise. As in any relatively young field, many gaps and questions remain. In this article, we aim to advance this literature by illustrating ways to examine the interconnections between family functioning and children's sleep. We also call for increasing conceptual developments and testing of transactional models, using well-established and psychometrically sound objective and subjective measures, and expanding both the family functioning domains and sleep parameters assessed.

Keywords

family functioning; sleep; child development

Sufficient and good-quality sleep is fundamental for children's well-being. Sleep–wake problems (sleep that is short and of poor quality, irregular schedules, sleepiness) in typically developing children are highly prevalent and associated with negative outcomes across a range of developmental domains, including socioemotional adjustment (1), physical health (2), and cognitive development (3). Researchers have discovered many influences on children's sleep, including technology, early school start times, and sociocultural aspects (4). In this article, we address sleep as it relates to a significant influence on children's development–family functioning. Children's sleep–wake behaviors are embedded in the family and relationships within the family play a primary role in shaping children's sleep.

Children's development in the context of their families has been a central theme of child development research for a long time. However, only relatively recently has sleep become a focus of such investigations. Attempts to explicate children's sleep in a family context are becoming more common, laying the foundation for more nuanced investigations and advanced conceptualizations. Our goal in this article is to illustrate the multifaceted ways to examine children's sleep in a family context, emphasizing studies that incorporate longitudinal designs and address transactional models (e.g., reciprocal effects, mediation,

moderation) and that include strong assessments of features of family and sleep (e.g., psychometrically sound measures, sleep assessments with objective methods). We also aim to highlight some of the scientific questions and conceptual and methodological considerations that need to be addressed to move this field forward. Many of these illustrations come from our own work, and while the article is not intended as a comprehensive review of the literature, we couch these findings in a broader context that reflects available evidence.

We use the terms *family functioning* and *family processes* interchangeably as broad labels for a variety of family-related constructs. These include positive aspects of family functioning, including maternal sensitivity, children's secure attachment to parents, and parents' involvement, as well as "negative" facets of family functioning, including marital aggression, aggression between parents and their children, and parents' psychopathology. Sleep is a complex and multifaceted phenomenon. Sleep problems and poor sleep refer to short sleep duration, poor sleep quality (e.g., difficulty falling asleep, frequent night awakenings), and irregular sleep schedules common among typically developing children. The studies we review are based on community samples, as investigations focused on clinical populations (e.g., individuals with clinically significant depression, externalizing problems, sleep disorders) are outside our scope. We include studies conducted with infants, children, and preadolescents, as well as, in a few cases, adolescents who were part of longitudinal studies that began when the youth were younger. Given the small number of studies in this field, we generally do not present findings separately for children of various ages, but refer to *children* in a broad sense.

Sleep-wake behaviors are determined by a range of biological, social, and cultural factors and systems that can be well construed from a developmental ecological systems perspective (5, 6). These factors and systems frequently interact to affect children's sleep. For example, family functioning is embedded in a cultural context, and both family and cultural influences on children's sleep can be moderated by children's individual characteristics. This viewpoint also emphasizes the ongoing bidirectional links between family functioning and children's sleep. For example, parents' behavior can influence children's sleep, which in turn can affect parents' mental health and family processes. In this article, we adopt this general transactional systems framework (5, 6) and its adaptation to sleep development (4, 7). The field of family functioning and children's sleep owes much to Sadeh and Anders's (7) conceptualization of the transactional/ ecological model of children's sleep.

In the following sections, we present findings on family functioning as a correlate and predictor of children's sleep. Then, we review work that examined children's sleep as a predictor of family functioning and highlight the importance of transactional models, including assessments of reciprocal effects between children's sleep and family processes. Illustrating the importance of broadening conceptualizations in this field, we then provide examples of studies that examined interactions between family functioning and sleep as predictors of many domains of child development (i.e., moderation effects) or pathways linking family functioning and children's sleep (i.e., mediating and intervening effects). We close with several recommendations for advancing this field.

FAMILY FUNCTIONING AS A CORRELATE AND PREDICTOR OF CHILDREN'S SLEEP

Studies that have addressed Children's sleep in a family context most commonly examined family functioning as a correlate, and less frequently as a longitudinal predictor, of children's sleep. The cross-sectional literature on these aspects is large and growing, so this section of the article is brief. Across many samples, in our work, various family processes longitudinally predicted sleep in elementary school-aged children. Marital conflict and aggression predicted variability in sleep schedules and sleep problems (8). Children's emotional insecurity associated with parents' marital discord predicted increased sleep-wake problems (9). Findings from other investigators further illustrate the influence of the marital relationship on young children's sleep. Mothers' hostility toward fathers was associated with difficulty initiating and maintaining sleep in infants and young children (10). In addition, mothers' perceptions of higher social support and fathers' reports of less parenting stress and higher marital satisfaction predicted more advanced sleep consolidation (sleeping for longer bouts of uninterrupted sleep at night) among young children (11). Finally, illustrating the influential role of parents' well-being, parents' depressive symptoms were associated with sleep problems among children (12, 13).

Research on the effects of family functioning on children's sleep has considered parents' behaviors and the parent-child relationship prominently, especially studies on infants and young children. An increasing number of these studies include strong assessments of both the sleep and parent-child relationship constructs. Higher quality of interactions between mothers and infants and fathers and infants predicted an increase in babies' nighttime sleep (14), and inconsistency in parenting practices predicted less sleep in young children (15). Moreover, aggression directed at children by parents predicted less optimal sleep quality for the children (16). In other studies, infants of mothers who implemented relaxing bedtime routines woke less frequently during the night (17). Furthermore, fathers' emotional support (18) and participation in caring for infants (19), as well as infants' attachment security to mothers (20), were associated with longer and higher quality sleep. Similarly, older children's perceived attachment security to parents (9) was associated with fewer sleep problems.

Overall, these findings indicate that many family processes serve as correlates and predictors of children's sleep duration and quality. Children who have positive relationships with their parents and live in supportive family environments tend to sleep longer and more soundly. Conversely, those who live in families with high levels of conflict, parental psychopathology, and various forms of family risk tend to have less optimal sleep. These findings are based on community samples with typically developing children; the associations between family processes and sleep are likely stronger in clinical samples with regard to children's or parents' psychopathology or sleep disorders. Sleep and vigilance represent opposing processes, and reducing responsiveness to the environment facilitates sufficient and good-quality sleep (21). Family environments perceived as safe, connected, and warm facilitate restful sleep for children, whereas those characterized by instability and

stress can result in a sense of danger and lack of protection, which can disrupt children's sleep (21, 22).

SLEEP AS A PREDICTOR OF FAMILY FUNCTIONING AND RECIPROCAL EFFECTS

Family processes predict children's sleep, but effects are also possible in the opposite direction. Children's sleep problems, including frequent night awakenings, can disrupt parents' sleep and how parents and the family function. A few studies have examined children's sleep as a predictor of family processes, but fewer still have attempted to elucidate reciprocal effects. Frequent night awakenings by infants predicted sleep disruptions in mothers and fathers, which in turn were associated with depressive symptoms in parents and subsequent negative perceptions of coparenting quality (23). Furthermore, sleep problems in children are associated with poor sleep quality, parenting stress, and fatigue in mothers (24), as well as less optimal physical health in both mothers and fathers (25). Sleep problems in children are also linked to emotional and behavioral dysregulation in children (1), which can increase family stress. Of the few studies examining reciprocal effects, most have investigated the extent to which "infants" night awakenings disrupt parents' functioning and sleep and vice versa (for a review, see 26). Reciprocal effects were observed between higher levels of mothers' emotional availability at infants' bedtime (e.g., sensitivity, nonintrusiveness, low hostility) and low levels of infants' nighttime crying and distress (27). In older children, we found reciprocal effects between sleep problems and both greater marital conflict (8) and lower levels of perceived child-parent attachment security (9).

To explain transactional dynamics in family members' sleep, we examined children's, mothers', and fathers' sleep nightly for 1 week (28). In children, duration and quality of sleep were predicted by fluctuations in mothers' sleep, and mothers' sleep was predicted by children's and fathers' sleep. Fathers' sleep was predicted only by mothers' sleep. Collectively, the literature suggests reciprocal relations between family functioning and sleep, and supports the continued consideration of transactional dynamics.

FAMILY FUNCTIONING AND CHILDREN'S SLEEP: MODERATION EFFECTS

Novel assessments have identified interactions between family functioning and sleep as predictors of several domains of children's adaptation and maladaptation. Assessments of such interactions are few and involve conceptualizing sleep as either the predictor or the moderator. These examinations may explain for whom and under what conditions different family and sleep processes influence children's development.

Shorter and less optimal quality of sleep moderated relations between perceived attachment insecurity to parents and children's performance on standardized achievement tests (29). The pattern of moderation effects was generally consistent with diathesis-stress and dual-risk models (30) in that attachment insecurity was associated with lower achievement only for children with less optimal sleep. Several other studies confirm this moderation pattern. Shorter sleep duration and a larger weekday-weekend difference in sleep duration served as moderating variables and worsened the effects of marital conflict on young adolescents'

aggressive behavior (31). In another investigation that considered sleep as a moderator, mothers' psychological control was associated with internalizing and externalizing symptoms for children with less optimal sleep (in children from homes of high socioeconomic status; 32). Furthermore, children with shorter sleep duration and quality in conjunction with high family risk (a composite of mothers' stressful life events, single-parent status, low maternal education, and poverty) had the highest body mass index; in this investigation, sleep was conceptualized as the predictor and family risk as the moderator (33). These studies suggest that children at most risk for negative developmental outcomes are those exposed to both family difficulties and sleep problems.

In a few additional studies that considered sleep as a moderator of relations between family functioning and children's development, a different pattern of interaction effects was observed. Maternal sensitivity in infancy (mothers who responded to their infants' cues in a timely and suitable manner) longitudinally predicted greater attachment security and executive functioning (34), as well as lower levels of internalizing and externalizing behaviors (35) among toddlers with more optimal sleep. Thus, illustrative of dual protection, more optimal sleep promotes well-being when it co-occurs with positive parenting. Similar to this effect, youth with both more optimal sleep and low levels of parenting difficulties (e.g., harsh parenting, psychological control) had the highest levels of cognitive performance (36). Collectively, these findings are consistent with the protective-reactive moderating process proposed by Luthar, Cicchetti, and Becker (37), which suggests that more optimal sleep is advantageous in the context of low family risk and positive parenting.

FAMILY FUNCTIONING AND CHILDREN'S SLEEP: MEDIATING AND INTERVENING EFFECTS

To address the question of why family processes may be associated with children's sleep, researchers have begun to identify pathways of effects. Even in the context of the few studies on reciprocal and moderation effects, assessments of intervening and mediation effects linking family functioning and children's sleep are more scarce. In a study using a three-wave longitudinal design (ages 8, 10, and 13 years), children's perceived emotional insecurity in their parents' marital relationship was identified as an intervening variable linking greater exposure to marital conflict with increasing sleep problems (38). In another multiwave study (ages 9 months, 27 months, and 4 years), fathers' hostile parenting mediated relations between fathers' marital hostility and an increase in children's sleep difficulties (problems initiating and maintaining sleep; 10). Moreover, mothers with depressive symptoms and dysfunctional cognitions (e.g., excessive worrying about infants' needs during the night) had more contact with their infants at night, which in turn forecasted more night awakenings among infants (39). To advance this literature, researchers need to expand their focus to identify pathways and mechanisms of effects.

MOVING FORWARD

Investigations of children's sleep in a family context are on the rise, yet as is typical in relatively young areas of inquiry, many conceptual and methodological issues need to be addressed to move the field forward. Next, we highlight five key issues.¹

First, as the number of studies increases, researchers should focus on integrating new empirical evidence on family functioning and children's sleep into models of child development (or pediatric sleep) or developing new sleep-specific frameworks; many theories can be expanded to incorporate sleep (41). For example, sleep theory may be incorporated into developmental models such as those addressing child–parent attachment (9, 20), emotional insecurity in the marital relationship (9), diathesis–stress processes (30), or biobehavioral perspectives on development (42). Furthermore, the literature on parenting can be expanded or tailored to incorporate findings on bedtime routines, nighttime parenting, and the sleep of children and other family members (15, 23, 27, 39). Connecting data with pertinent conceptual models would be facilitated and strengthened by increased sharing of ideas and findings across disciplines concerned with children's sleep.

Second, research that develops and tests transactional models, especially longitudinal assessments with three or more waves of data, is scarce yet critical for addressing key developmental questions. As is common in the developmental literature, such longitudinal designs would allow us to answer questions, including those pertaining to the shape of developmental trajectories, reciprocal influences, timing and chronicity (e.g., short- or long-term sleep problems), mediation and moderation, and change on change (e.g., change in family functioning as a predictor of change in sleep); some of these topics have not been broached. Accompanied by state-of-the-science statistical analyses, these designs would also allow for discerning developmental effects and sensitive periods, which are mostly unknown. For example, the nature and magnitude of relations between family functioning and sleep may vary across infancy, childhood, and adolescence, and explicating potential differences is critical. Furthermore, investigations of gender-related effects and individual differences in these models may illuminate many facets of children's sleep in the context of the family.

Third, methodologically sound examination of many sleep parameters is imperative (43). In addition to sleep duration, which is the most commonly studied parameter, other parameters should be considered, including quality of sleep, schedule (e.g., regularity across the week), chronotype (e.g., time of optimal arousal), and other sleep–wake processes (e.g., daytime sleepiness, bedtime routines, sleep consolidation, distribution of sleep across 24 hr, sleep-onset latency). The importance of such assessments is highlighted by the fact that findings frequently emerge for sleep quality but not sleep duration (36). Furthermore, most studies have relied on subjective reports of sleep, many of which comprise a few sleep items or measures with unknown psychometric properties (44). The literature has grown sufficiently to raise the bar toward strong assessments of children's sleep with objective measures and psychometrically sound subjective measures. Each method of sleep assessment (e.g., actigraphy, videography, questionnaires, diaries) has advantages and disadvantages, and methods should be chosen carefully in synchrony with research questions (43). For example, videography may be valuable for investigating parent–infant interactions during the night, child reports may be well suited for assessments of daytime sleepiness in older children, and actigraphy may be useful for assessing sleep continuity and fragmentation.

¹Several of the recommendations in this section are presented in Ref. 40 and were discussed by colleagues in a forum on sleep and children's development sponsored by the Society for Research in Child Development, which is summarized in Ref. 41; colleagues' names are listed in that chapter.

Fourth, family domains investigated in relation to children's sleep have expanded to include some facets of parenting practices, child–parent attachment, family aggression, and parents' psychopathology. Nevertheless, the aforementioned domains and other family processes have many uncharted dimensions. This gap becomes more pronounced when considering the age of children studied (e.g., many studies on parenting and parent–child relationships are conducted with infants and young children); researchers should widen examinations of family structure and function variables across various developmental periods. For example, single and divorced parents may face particular challenges that affect their parenting during the day and night. In addition, little is known about nighttime parenting (e.g., quality, practices), coparenting, the role of fathers, sibling relationships, and chaotic family environments and how they relate to the sleep of children and other family members.

Fifth, sleep and family functioning are associated in complex ways, and some of the most informative investigations are those that incorporate additional levels of influence, such as the broader sociocultural context (11, 45) or individual differences in children's physiological regulation (42). For example, the importance of assessing many levels of influence is illustrated by the finding that mothers' depressive symptoms interacted with children's vagal regulation (an index of parasympathetic nervous system activity) to predict sleep problems longitudinally (42): Children most at risk for poor sleep were those with both depressed mothers and less optimal vagal regulation. Similarly, in another study, parents' stress interacted with socioeconomic status to predict sleep problems and the pattern of effects supported dual risk (11). Thus, children with the most sleep problems came from homes characterized by high levels of parenting stress and lower socioeconomic status.

In this article, we have illustrated that progress in understanding sleep within a family context requires transactional developmental research with advanced conceptualization and robust methods. This research could allow us to understand more thoroughly the family processes that lead children to sleep well, which in turn has important ramifications for their health and well-being. Likewise, such research could allow us to understand the consequences of children's sleep for interactions with their parents, mothers' and fathers' sleep and adjustment, and other key family circumstances (e.g., chaotic home environments). We are optimistic about the growth of this area of inquiry; tackling the many scientific questions will keep researchers occupied for some time.

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References

1. Gregory AM, Sadeh A. Sleep, emotional and behavioral difficulties in children and adolescents. *Sleep Medicine Reviews*. 2012; 16:129–136. <https://doi.org/10.1016/j.smrv.2011.03.007>. [PubMed: 21676633]

2. Shochat T, Cohen-Zion M, Tzischinsky O. Functional consequences of inadequate sleep in adolescents: A systematic review. *Sleep Medicine Reviews*. 2014; 18:75–87. <https://doi.org/10.1016/j.smrv.2013.03.005>. [PubMed: 23806891]
3. Astill RG, Van der Heijden KB, Van Ijzendoorn MH, Van Someren EJ. Sleep, cognition, and behavioral problems in school-age children: A century of research meta-analyzed. *Psychological Bulletin*. 2012; 138:1109–1138. <https://doi.org/10.1037/a0028204>. [PubMed: 22545685]
4. El-Sheikh M, Sadeh A. I. Sleep and development: Introduction to the monograph. *Monographs of the Society for Research in Child Development*. 2015; 80(1):1–14. <https://doi.org/10.1111/mono.12141>.
5. Bronfenbrenner, U. *The ecology of human development*. Cambridge, MA: Harvard University Press; 1979.
6. Bronfenbrenner U, Ceci SJ. Nature-nurture reconceptualized in developmental perspective—A bioecological model. *Psychological Review*. 1994; 101:568–586. <https://doi.org/10.1037/0033-295x.101.4.568>. [PubMed: 7984707]
7. Sadeh A, Anders TF. Infant sleep problems: Origins, assessment, interventions. *Infant Mental Health Journal*. 1993; 14:17–34. [https://doi.org/10.1002/1097-0355\(199321\)14:1](https://doi.org/10.1002/1097-0355(199321)14:1).
8. Kelly RJ, El-Sheikh M. Marital conflict and children's sleep: Reciprocal relations and socioeconomic effects. *Journal of Family Psychology*. 2011; 25:412–422. <https://doi.org/10.1037/a0023789>. [PubMed: 21553963]
9. Keller PS, El-Sheikh M. Children's emotional security and sleep: Longitudinal relations and directions of effects. *Journal of Child Psychology and Psychiatry*. 2011; 52:64–71. <https://doi.org/10.1111/j.1469-7610.2010.02263.X>. [PubMed: 20500540]
10. Rhoades KA, Leve LD, Harold GT, Mannerling AM, Neiderhiser JM, Shaw DS, Reiss D. Marital hostility and child sleep problems: Direct and indirect associations via hostile parenting. *Journal of Family Psychology*. 2012; 26:488–498. <https://doi.org/10.1037/a0029164>. [PubMed: 22888782]
11. Bernier A, Bélanger M-È, Bordeleau S, Carrier J. Mothers, fathers, and toddlers: Parental psychosocial functioning as a context for young children's sleep. *Developmental Psychology*. 2013; 49:1375–1384. <https://doi.org/10.1037/a0030024>. [PubMed: 22985297]
12. El-Sheikh M, Kelly RJ, Bagley EJ, Wetter EK. Parental depressive symptoms and children's sleep: The role of family conflict. *Journal of Child Psychology and Psychiatry*. 2012; 53:806–814. <https://doi.org/10.1111/j.1469-7610.2012.02530.x>. [PubMed: 22309313]
13. de Jong DM, Cremone A, Kurdziel LBF, Desrochers P, LeBourgeois MK, Sayer A, Spencer RMC. Maternal depressive symptoms and household income in relation to sleep in early childhood. *Journal of Pediatric Psychology*. 2016; 41:961–970. <https://doi.org/10.1093/jpepsy/jsw006>. [PubMed: 26994853]
14. Bordeleau S, Bernier A, Carrier J. Maternal sensitivity and children's behavior problems: Examining the moderating role of infant sleep duration. *Journal of Clinical Child & Adolescent Psychology*. 2012; 41:471–481. <https://doi.org/10.1080/15374416.2012.686101>. [PubMed: 22642676]
15. Staples AD, Bates JE, Petersen IT. IX. Bedtime routines in early childhood: Prevalence, consistency, and associations with nighttime sleep. *Monographs of the Society for Research in Child Development*. 2015; 80(1):141–159. <https://doi.org/10.1111/mono.12149>. [PubMed: 25704740]
16. Kelly R, Marks B, El-Sheikh M. Longitudinal relations between parent-child conflict and children's adjustment: The role of children's sleep. *Journal of Abnormal Child Psychology*. 2014; 42:1175–1185. <https://doi.org/10.1007/s10802-014-9863-z>. [PubMed: 24634010]
17. Mindell JA, Telofski LS, Wiegand B, Kurtz ES. A nightly bedtime routine: Impact on sleep in young children and maternal mood. *Sleep*. 2009; 32:599–606. [PubMed: 19480226]
18. Bernier A., Tétreault, É., Bélanger, M-È., Carrier, J. Paternal involvement and child sleep: A look beyond infancy. *International Journal of Behavioral Development*. 2016. <https://doi.org/10.1177/0165025416667851>
19. Tikotzky L, Sadeh A, Glickman-Gavrieli T. Infant sleep and paternal involvement in infant caregiving during the first 6 months of life. *Journal of Pediatric Psychology*. 2011; 36:36–46. <https://doi.org/10.1093/jpepsy/jsq036>. [PubMed: 20444853]

20. Bélanger MÈ, Bernier A, Simard V, Bordeleau S, Carrier J. Attachment and sleep among toddlers: Disentangling attachment security and dependency. *Monographs of the Society for Research in Child Development*. 2015; 80(1):125–140. <https://doi.org/10.1111/mono.12148>. [PubMed: 25704739]
21. Dahl RE, Lewin DS. Pathways to adolescent health sleep regulation and behavior. *Journal of Adolescent Health*. 2002; 31:175–184. [https://doi.org/10.1016/S1054-139X\(02\)00506-2](https://doi.org/10.1016/S1054-139X(02)00506-2). [PubMed: 12470913]
22. Worthman, CM., Melby, MK. Toward a comparative developmental ecology of human sleep. In: Carskadon, M., editor. *Adolescent sleep patterns: Biological, social, and psychological influences*. New York, NY: Cambridge University Press; 2002. p. 69-117.
23. McDaniel BT, Teti DM. Coparenting quality during the first three months after birth: The role of infant sleep quality. *Journal of Family Psychology*. 2012; 26:886–895. <https://doi.org/10.1037/a0030707>. [PubMed: 23244456]
24. Meltzer LJ, Mindell JA. Relationship between child sleep disturbances and maternal sleep, mood, and parenting stress: A pilot study. *Journal of Family Psychology*. 2007; 21:67–73. <https://doi.org/10.1037/0893-3200.21.1.67>. [PubMed: 17371111]
25. Martin J, Hiscock H, Hardy P, Davey B, Wake M. Adverse associations of infant and child sleep problems and parent health: An Australian population study. *Pediatrics*. 2007; 119:947–955. <https://doi.org/10.1542/peds.2006-2569>. [PubMed: 17473096]
26. Meltzer, LJ., Westin, AM. Impact of child sleep disturbances on parent sleep and daytime functioning. In: El-Sheikh, M., editor. *Sleep and development: Familial and socio-cultural considerations*. New York, NY: Oxford University Press; 2011. p. 113-131.
27. Philbrook LE, Teti DM. Associations between bedtime and nighttime parenting and infant Cortisol in the first year. *Developmental Psychobiology*. 2016; 58:1087–1100. <https://doi.org/10.1002/dev.21442>. [PubMed: 27363863]
28. Kourou, CD., El-Sheikh, M. Within-family relations in objective sleep duration, quality, and schedule. *Child Development*. 2016. <https://doi.org/10.1111/cdev.12667>
29. Keller PS, El-Sheikh M, Buckhalt JA. Children's attachment to parents and their academic functioning: Sleep disruptions as moderators of effects. *Journal of Developmental & Behavioral Pediatrics*. 2008; 29:441–449. <https://doi.org/10.1097/DBP.0b013e318182a9b4>.
30. Sameroff, AJ. Development systems: Contexts and evolution. In: Kessen, W., editor. *Handbook of child psychology: Vol. I. History, theory, and methods*. New York, NY: Wiley; 1983. p. 237-294.
31. Lemola S, Schwarz B, Siffert A. Interparental conflict and early adolescents' aggression: Is irregular sleep a vulnerability factor? *Journal of Adolescence*. 2012; 35:97–105. <https://doi.org/10.1016/j.adolescence.2011.06.001>. [PubMed: 21733568]
32. El-Sheikh M, Hinnant JB, Kelly RJ, Erath SA. Maternal psychological control and child internalizing symptoms: Vulnerability and protective factors across bioregulatory and ecological domains. *Journal of Child Psychology and Psychiatry*. 2010; 51:188–198. <https://doi.org/10.1111/j.1469-7610.2009.02140.x>. [PubMed: 19703095]
33. Bagley EJ, El-Sheikh M. Familial risk moderates the association between sleep and zBMI in children. *Journal of Pediatric Psychology*. 2013; 38:775–784. <https://doi.org/10.1093/jpepsy/jst031>.
34. Bernier A, Bélanger M-È, Tarabulsy GM, Simard V, Carrier J. My mother is sensitive, but I am too tired to know: Infant sleep as a moderator of prospective relations between maternal sensitivity and infant outcomes. *Infant Behavior and Development*. 2014; 37:682–694. <https://doi.org/10.1016/j.infbeh.2014.08.011>. [PubMed: 25243613]
35. Bordeleau S, Bernier A, Carrier J. Longitudinal associations between the quality of parent-child interactions and children's sleep at preschool age. *Journal of Family Psychology*. 2012; 26:254–262. <https://doi.org/10.1037/a0027366>. [PubMed: 22369463]
36. El-Sheikh M, Tu KM, Erath SA, Buckhalt JA. Family stress and adolescents' cognitive functioning: Sleep as a protective factor. *Journal of Family Psychology*. 2014; 28:887–896. <https://doi.org/10.1037/fam0000031>. [PubMed: 25329625]

37. Luthar SS, Cicchetti D, Becker B. The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*. 2000; 71:543–562. <https://doi.org/10.1111/1467-8624.00164>. [PubMed: 10953923]
38. Kelly RJ, El-Sheikh M. Longitudinal relations between marital aggression and children's sleep: The role of emotional insecurity. *Journal of Family Psychology*. 2013; 27:282–292. <https://doi.org/10.1037/a0031896>. [PubMed: 23458697]
39. Teti DM, Crosby B. Maternal depressive symptoms, dysfunctional cognitions, and infant night waking: The role of maternal nighttime behavior. *Child Development*. 2012; 83:939–953. <https://doi.org/10.1111/j.1467-8624.2012.01760.x>. [PubMed: 22506917]
40. El-Sheikh M, Sadeh A. Sleep and development: Advancing theory and research. *Monographs of the Society for Research in Child Development*. 2015; 80(1):1–215.
41. El-Sheikh M, Buckhalt JA. Moving sleep and child development research forward: Priorities and recommendations from the SRCD-sponsored forum on sleep and child development. *Monographs of the Society for Research in Child Development*. 2015; 80(1):15–32. <https://doi.org/10.1111/mono.12142>. [PubMed: 25704733]
42. Keller PS, Kouros CD, Erath SA, Dahl RE, El-Sheikh M. Longitudinal relations between maternal depression and child sleep problems: The role of parasympathetic nervous system activity. *Journal of Child Psychology and Psychiatry*. 2014; 55:172–179. <https://doi.org/10.1111/jcpp.12151>. [PubMed: 24117807]
43. Sadeh A. III. Sleep assessment methods. *Monographs of the Society for Research in Child Development*. 2015; 80(1):33–48. <https://doi.org/10.1111/mono.12143>. [PubMed: 25704734]
44. Spruyt K, Gozal D. Pediatric sleep questionnaires as diagnostic or epidemiological tools: A review of currently available instruments. *Sleep Medicine Reviews*. 2011; 15:19–32. <https://doi.org/10.1016/j.smrv.2010.07.005>. [PubMed: 20934896]
45. Kelly RJ, El-Sheikh M. Parental problem drinking and children's sleep: The role of ethnicity and socioeconomic status. *Journal of Family Psychology*. 2016; 30:708–719. <https://doi.org/10.1037/fam0000209>. [PubMed: 27100563]