

# Maternal separation anxiety as a regulator of infants' sleep

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**Background:** The regulation of infants' sleep is determined not only by biological factors but by relational aspects too. This study focused on maternal separation anxiety and examined its association with sleep–wake regulation at 10 months of age. **Method:** In a community sample comprising 52 infants and their mothers, sleep was measured objectively with an activity monitor, as well as through questionnaires. The mothers reported on their own separation anxiety and on the child's perceived distress. **Results:** The main finding was that maternal separation anxiety was linked to settling to sleep routines and to night-waking. The contribution of the mothers' own separation anxiety to their infants' night-waking remained significant after controlling for the child's fussiness. **Conclusions:** Consistent with the transactional perspective, the current research documented an interplay between maternal separation anxiety and aspects of the child's sleep–wake transitions. **Keywords:** Separation anxiety, nighttime parenting, sleep, fussiness, infants.

Difficulties in initiating and maintaining continuous sleep have been attributed to various factors, including maturational (Hoppenbrouwers et al., 1988; Salzarulo & Fagioli, 1999), emotional (Dahl, 1996), learning (Richman et al., 1985), temperament (Carey, 1974; Scher, Tirosh, & Lavie, 1998), as well as contextual and cultural (Jenni & O'Connor, 2005; Van Tassel, 1985). Contextual factors are considered relevant to the study of infants' sleep, as sleep and waking patterns develop through transactions between the child's constitutional characteristics and the caregiving environment (Anders, 1994). Maternal variables that have been identified as correlates of infants' sleep problems, across different cultural settings, include depression, anxiety and stress (e.g., Hiscock & Wake, 2001; Thome & Skuladottir, 2005). Whereas infants' sleep might impact maternal mood (Dennis & Ross, 2005), maternal well-being could also shape the child's sleep pattern (Warren et al., 2006). While directionality is yet to be clarified, Anders' (1994) contention that the mother–child tie is an important regulator of the infant's sleep has guided much of the literature on caregiving and sleep.

Anders and his colleagues have formulated a transactional model of sleep–wake regulation (e.g., Goodlin-Jones, Burnham, & Anders, 2000), which assumes that the regulation of sleep is mediated by parent–child interaction that, in turn, is responsive to a larger system of dynamic contextual influences. Within this framework, it has been demonstrated how different relationships, spanning from normal variations to pathology, are reflected in sleep problems (Goodlin-Jones et al., 2000).

One psychological construct that has shaped models about the interplay between sleep and

mother–child relationships is separation anxiety. From an attachment perspective (Bowlby, 1969), the child's separation distress has been a major behavioral organizer. As sleep typically involves separating from valued people, objects and activities (Paret, 1983), the rationale for investigating sleep–wake regulation in the context of separation anxiety is quite clear. Falling asleep each night can be construed as a separation, whereas waking up provides an opportunity for reunion (Anders, 1994). A. Freud (1965) maintained that going to bed is a prototype of separation; in going to bed, she argued, the child is required to separate physically from the parents and disengage from the events of the day. Depending on the developmental stage and the previous experience of the child, this separation can induce anxiety, a sense of helplessness and/or frustration. In a similar fashion, from the standpoint of attachment theory (Bowlby, 1969), at night, when proximity to the attachment figure is not maintained, infants signal their attachment needs by crying and actively seeking physical contact and comfort.

In an overview of attachment theory, Cassidy (1999) highlights natural clues to danger, and points out stimuli that are not inherently dangerous but that increase the likelihood of danger. These stimuli include darkness and aloneness (Bowlby, 1973). As a consequence, the attachment system is bound to be activated at night, and attachment behaviors that seek proximity to a protective caregiver (e.g., crying) are common. A deactivation of the attachment system is expected in the comforting nighttime presence of the caregiver. Whereas attachment theory typically highlights separation anxiety, proximity seeking, and the search for a safe haven (Bowlby, 1988), the parental side of the attachment system has also been acknowledged (Bowlby, 1988). For example, George and Solomon (1999) have elaborated on a caregiving

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behavioral system that is triggered by, and complements, the child's attachment system. According to their model, caregiving behavior is organized in a behavioral system independent from, but developmentally and behaviorally linked to, attachment (George & Solomon, 1996). This conceptualization implies a shift from the perspective of *being protected*, which is the goal of the child, to the perspective of *providing protection*, which is the goal of the parent (George & Solomon, 1999, p.650). When proximity is not maintained, there is a higher risk of failing to provide protection. In this sense, the sleep arena, which is typically marked by darkness and aloneness, signals potential danger, and hence distress, not only to the child (Bowlby, 1973) but also to the parent.

Hock (1984), who studied separation from the maternal perspective, defined maternal separation anxiety as an unpleasant emotional state that reflects concern and apprehension about leaving the child, and focused on the feelings of guilt, worry, and sadness that accompany short-term separation experiences (Hock et al., 1989). In a series of studies, Hock and colleagues have focused on maternal separation anxiety and examined its personality correlates (Hock et al., 1989), stability across time (Hock et al., 1988), and the accompanying behavior towards the child (Hock & Schirtzinger, 1992). Hock and her colleagues maintain that maternal separation anxiety is a unique dimension of motherhood which includes three facets: 1) the mother's feeling when separated from her child, 2) her concern regarding the child's distress during separation, and 3) her belief in the adequacy of alternative care. The construct of maternal separation anxiety is of particular interest in the context of sleep because the degree to which the mother experiences anxiety about separation has implications for her nighttime behavior. For example, her need for close proximity is likely to trigger an immediate response to fussing and crying.

Previous reports on the interplay between child's sleep and maternal separation (Scher, 1995; Scher & Blumberg, 1999) showed that whereas at three months of age, mothers' level of separation anxiety was not related to their babies' sleep, it did predict night-waking at nine months (Scher, 1995). It was further indicated that at 12 months, mothers' separation anxiety induced during a brief but stressful separation in the laboratory was associated with reports of night-waking (Scher & Blumberg, 1999). Mothers who expressed low separation anxiety reported significantly fewer awakenings than the more anxious mothers. Since sleep measurement in that report was based on mothers' subjective assessment of the child's sleep, it is not clear if, in fact, the sleep of the more anxious mothers' babies was less regulated and more fragmented compared to the sleep of the children of mothers with lower levels of separation concerns. Furthermore, given that other factors were not controlled for, including

the child's temperament, it was not clear if the link between separation anxiety and night-waking is a specific sleep-related association, or reflects a tendency of anxious mothers to perceive their children as more demanding and difficult.

A number of considerations guided the present study. First, the latter part of the first year was the age chosen for investigation since it is a period of heightened separation anxiety (Bowlby, 1969). Second, to differentiate mothers' own distress from that which is attributed to the child, both facets of separation anxiety were measured. Third, to disentangle the parental view on the child's sleep from the actual sleep pattern, subjective as well as objective sleep measures were applied. Finally, to control for child's effects, temperament data was obtained. The main hypotheses were that: 1) more sleep difficulties are expected when higher levels of separation anxiety are reported, and 2) separation anxiety will be positively associated with parental nighttime involvement with the child.

## Method

### Participants

The present sample of mothers and their infants participated in a longitudinal investigation (Scher & Asher, 2004). The study, which was conducted in compliance with the University of Haifa requirements for the ethical conduct of research with human subjects, involved recruitment of mothers of healthy infants, who signed an informed consent to take part in a 'child development' follow-up. Recruitment was carried out through well-baby clinics and childcare centers. A letter describing the study was handed to the mothers by the nurse/teacher. Interested mothers contacted the research team to schedule a home visit at their convenience. Participants had to meet the criteria of Hebrew-speaking/reading mother with 8-month-old healthy infant with no identified developmental delay. All data were collected during home visits: the mothers completed questionnaires and the child's nocturnal sleep was objectively monitored.

Out of the initial sample of 67 infants (34 boys and 33 girls), 61 of the mothers completed the maternal questionnaires that served for this report. As will be described below, complete data sets that also included objective sleep recordings were obtained for 52 of the infants (the characteristics of the sub-sample with complete data sets were not different from the group with the missing actigraphy data; for example, maternal education: 15.88 vs. 15.33, maternal separation anxiety 2.79 vs. 2.98, temperament 3.03 vs. 2.95, respectively for the two groups). Thirty-four percent of the infants were first-born, 42% were the second, and 24% were the third or fourth child in the family. Most of the participants were from intact two-parent families (94%), primarily from a middle-class background. Mothers ranged in age from 25 to 47 years ( $M = 31.5$ ,  $Sd = 4.1$ ) with a mean education level of 15.7 years ( $Sd = 2.3$ , range 12 to 21). The demographic and temperament data that are presented in this report were collected at

8 months; the second data wave, collected at 10 months, served for addressing the hypothesized link between separation anxiety and sleep-wake regulation.

### Measures

**Sleep questionnaire.** A questionnaire that describes sleep patterns and habits (Scher et al., 1995) was completed by the mothers when their child was 10 months of age. The questionnaire includes items that describe the child's sleep routines and bedtime habits, night-waking episodes and their characteristics, as well as the reasons for night-waking. On a scale of four, the respondents rated the severity of their child's sleep problem (no problem to severe problem). In addition, using Richman's (1981) criteria for sleep problems, two nighttime composite scores were scored. The *sleep schedule* cluster included sleep onset time, time to fall asleep, total sleep time; the *awakening index* included the number of interrupted nights, number of awakenings per night, and the average length of each awakening. Each index is rated on a scale from 0 to 4. A score of 0 indicates that there is no problem and a score of 4 denotes a severe problem. The mean *schedule* index was 1.41 (Sd = .71) and the mean *awakening* index was 1.80 (Sd = 1.03). Cronbach alpha was .61 and .60 respectively, for *schedule* and *awakening* index.

**Sleep recordings.** Objective sleep assessment was conducted by means of miniature actigraphs (Ambulatory Monitoring, Ardsley, NY, USA), a small solid-state computerized movement detector which continuously registers body movement. The actigraphs were initialized and downloaded to a PC; the raw data were analyzed using the ASA program validated for infants (Sadeh et al., 1995). The following parameters were used for the present report: **SOT** – sleep onset time; **WAKE** – the number of awakenings longer than 5 minutes; and **SEF** – sleep efficiency, defined as time asleep out of the total 'sleep' period. The actigraph was attached to the child's left ankle for three-night recordings (the parent marked on a log the time the actigraph was attached/removed, the time the infant was placed in bed and morning wake-time). Owing to technical failures, child illness, and parental non-compliance, sleep recordings were obtained for 52 infants. The stability across the three nights was .78 and .88 respectively, for SEF and WAKE. The average score across the three nights was used for the analyses. The mean SOT was 21.02 (Sd = .99), mean Wakes = 1.45 (Sd = 1.14) and mean SEF = 95.94 (Sd = 2.84).

**Temperament.** The Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979) was completed by the mothers when their infants were 8 months old. The instrument is a 32-item questionnaire designed to assess, on a 7-point Likert scale, perceived infant temperament, where a higher score denotes a more difficult temperament. The ICQ consists of four subscales: *fussy/difficult* (16 items), *unadaptable* (5 items), *unsociable* (5 items), and *persistent* (6 items). In the present study, only the *fussy/difficult* had a good internal reliability (Cronbach alpha = .87)

and thus will serve as the temperament measure (M = 3.02, Sd = .72).

**Separation anxiety.** The maternal separation anxiety questionnaire (MSAS; Hock, McBride, & Gnezda, 1989) was filled out by the mothers when their infant was 10 months old. The tool includes 35 items designed to measure three domains of maternal feelings and cognitions about separation: 1) *maternal separation anxiety*, which taps the mothers' distress and concern when separated from her child, 2) *maternal perception of separation effects on the child*, which reflects the mother's beliefs about her child's adjustment to separation, and 3) *employment-related separation concerns*, which refers to mothers' perceptions concerning alternative caregivers and balancing the maternal role with career investment. Mothers responded to the questions on a 5-point scale, ranging from 'strongly disagree' to 'strongly agree', where a high score denotes high anxiety. In the present sample, the mean level of mothers' separation anxiety (MSA) was 3.02 (Sd = .55), the perceived child separation anxiety (CSA) was M = 2.29 (Sd = .61), and alternative care concerns (ACC) was M = 2.73 (Sd = .73). The internal consistency of the three sub-scales were  $\alpha = .89$ , .81, and .76, respectively for MSA, CSA, and ACC.

### Results

Thirty-seven percent of the mothers ( $n = 19/52$ ) reported that their child had a sleep problem, rated as moderate to severe; 64% attributed interrupted sleep to hunger and physical discomfort, whereas emotional factors, such as fears and loneliness, were considered as the reason for night-waking by 36% of the mothers. Fussy tendencies (a score of >3.5 on a scale of 7) were reported for 25% ( $n = 13/52$ ) of the infants.

Measuring sleep by both maternal reports and objective records allowed us to examine their compatibility. It was indicated that the awakening index was positively associated with the number of recorded wakes (Spearman  $r = .32$ ,  $p < .05$ ) and negatively associated with the sleep efficiency (SEF) score ( $r = -.30$ ,  $p < .05$ ). The sleep schedule index was strongly associated with the actual time of falling asleep as registered in the actigraph (Spearman  $r = .58$ ,  $p < .001$ ). A comparison between the sleep of boys and girls revealed no gender effect except a difference in the SEF. Compared to the boys, the sleep of the girls was slightly more efficient [girls = 96.45 (2.84) versus boys: mean = 95.45 (Sd = 2.81),  $t = 2.03$ ,  $p = .05$ ].

Twenty-five percent of the mothers expressed a low level of maternal separation anxiety ( $\leq 2.5$  on a scale of 5), and 15% indicated high level of anxiety (>3.5). The means and standard deviations of the various scales are presented in Table 1. It was found that higher levels of maternal separation anxiety were associated with more night-waking episodes, as registered on the actigraph ( $r = .35$ ,  $p < .01$ ), and

**Table 1** Associations between the child temperament, separation anxiety and the sleep variables

	Separation anxiety			Sleep reports		Actigraph	
	MSA	CSA	ACC	Schedule	Awakening	WAKE	SEF
Mean	3.02	2.29	2.73	1.41	1.80	1.45	95.9
Sd	.55	.61	.73	.71	1.03	1.14	2.8
$\alpha$	.89	.81	.76	.61	.60	.88	.78
Fussy	.11	.01	.03	.28*	.38**	.31*	-.31*
MSA		.13	.33**	.04	.07	.35**	-.35**
CSA			.48***	.13	.16	-.10	.08
ACC				.14	.02	.02	-.07

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

with less efficient sleep ( $r = -.35$ ,  $p < .01$ ). Fragmented sleep was also correlated with fussy temperament ( $r = .31$ ,  $p < .01$ ). A partial correlation indicated that the association between separation anxiety and more fragmented sleep remained significant after controlling for fussiness ( $r = .33$ ,  $p < .05$  and  $r = .31$ ,  $p < .05$ , respectively for WAKE and SEF). The timing of falling asleep (SOT) was not related to mothers' separation anxiety. Mothers' perception of the child's separation distress and their view of alternative caregiving were not associated with the child's sleep. None of the separation anxiety scales were associated with mothers' age or education. Mothers' separation anxiety was not associated with their perception of the child's separation distress, but was significantly correlated with mothers' concerns about alternative care ( $r = .33$ ,  $p < .01$ ).

To examine the combined contribution of temperament and separation anxiety to sleep-wake regulation, step-wise regressions were conducted. To predict SEF and WAKE, the following variables were entered: gender, fussiness, and mothers' separation anxiety. Fussiness predicted 14% ( $B = -.28$ ,  $p < .05$ ) and MSA contributed additional 9% ( $B = -.29$ ,  $p < .05$ ) to the explained variance of the sleep efficiency score. A similar pattern was obtained with the number of wakes (>5 min) as the dependent variable ( $B = .31$ ,  $p < .05$  and  $B = .28$ ,  $p < .05$ , respectively for fussiness and MSA).

To further examine the association between the child's sleep habits and mothers' separation anxiety, we compared the levels of anxiety expressed by mothers of infants who reported that they were actively involved in regulating their child to sleep (e.g., stroking, rocking, singing) to those who were uninvolved. It was found that the involved mothers expressed significantly higher levels of maternal separation anxiety [ $M = 3.12$  ( $Sd = .52$ ) versus  $M = 2.52$  ( $Sd = .26$ ),  $t = 5.26$ ,  $p < .001$ ], but the groups were not different in terms of mothers' perception of the child's separation distress ( $t = .07$ , n.s.). Similarly, the mean level of maternal separation anxiety of mothers who were present in the room when the child fell asleep [ $M = 3.16$ ,  $Sd = .57$ ] was slightly higher compared to mothers of infants who fell

asleep alone [ $M = 2.86$ ,  $Sd = .35$ ,  $t = 2.00$ ,  $p = .05$ ]; the two groups were similar with respect to mothers' perception of the child's separation anxiety [ $M = 2.24$  ( $Sd = .54$ ) versus  $M = 2.37$  ( $Sd = .67$ ),  $t = .81$ , n.s.]. Focusing on night-waking, it was revealed that mothers who attributed night-waking to fears, as compared to (or in addition to) physical discomfort (e.g., hunger, wet diaper), also reported higher levels of child separation anxiety ( $M = 2.51$  ( $Sd = .60$ ) versus  $M = 2.17$  ( $Sd = .59$ ),  $t = 1.97$ ,  $p = .05$ ). In contrast, the level of mothers' separation anxiety was not associated with the perceived causes of the child's night-waking ( $t = 1.41$ , n.s.).

The relationships between the demographic variables and mother's perception of her child's characteristics indicated that birth order was negatively related to the level of fussiness ( $r = -.37$ ,  $p < .01$ ). Mothers' age was positively correlated with the sleep schedule index ( $r = .27$ ,  $p < .05$ ) and mothers' education was positively associated with the awakening index ( $r = .26$ ,  $p < .05$ ). None of the separation anxiety scales were associated with mothers' age or education.

## Discussion

The objective sleep data, specifically, efficient sleep-wake regulation, confirm the low-risk nature of the present group of children. However, according to mothers' evaluation, 37% of the children demonstrated moderate to severe sleep problems. This discrepancy highlights the difference between objective vs. subjective definition of problematic sleep, which has been previously discussed in the literature (see, for example, Anders, 1994; Hayes, 2002). Similar to other reports, the compatibility between parents' reports of the timing and duration of sleep and sleep itself was higher than with respect to night-waking (e.g., Sadeh, 1996).

In this group of 10-month-olds, the prevalence of sleep problems, as rated by their mothers, was particularly high compared to previous reports. Data obtained from community samples of infants and young children indicate that around 25–30% of parents of young children express sleep-related

concerns (e.g., Mindell & Owens, 2003; Richman, 1981). This could be due to an age-related trend, specifically, the increase in night-waking observed at the end of the first year (Anders, 1979; Moore & Ucko, 1957; Scher, 1991). A second reason for the high prevalence of sleep problems could be contextual. In two other Israeli samples (Scher, 2001; Scher & Dror, 2003) the prevalence of sleep problems, as reported by mothers, was at the upper end compared to reports from other countries. These two explanations are not mutually exclusive. A longitudinal study that compares mothers and children from different cultural backgrounds could address this issue.

In the present sample of healthy 10-month-old infants, the majority of mothers expressed a medium level of separation anxiety. This result is in accord with the developmental stage (Hock & Schirtzinger, 1992), and in line with reports from other community samples (e.g., Scher & Blumberg, 1999). Interestingly, mothers who reported that they were worried and anxious when separated from the infant did not necessarily project similar feelings of distress onto their child. Although a certain degree of fit between the child's and the parents' representation of their relationships is important for smooth interaction (Bretherton et al., 1989), in adaptive relationships, parents separate their own state of mind from that of their child (e.g., Fonagy, 2001). In line with numerous other reports that did not find an association between maternal perception of difficult temperament and aspects of mother-child relationships (e.g., Mangelsdorf & Frosch, 2000; Scher & Mayseless, 2000), the level of fussiness was related neither to the mother's nor to the child's separation distress. McBride and Belsky (1988), who studied the characteristics and determinants of maternal separation anxiety, found that by itself difficult temperament was not a predictor of maternal separation anxiety.

Turning to the main question of the present study, the first hypothesis linking higher level of separation anxiety in the dyad with more sleep difficulties received support. It was shown that the level of maternal separation concerns was significantly associated with night-waking. The specific contribution of the present data set is twofold. First, the association between maternal separation anxiety and the child's sleep was found with respect to the objective rather than the subjective sleep reports. Specifically, higher maternal separation concerns were significantly correlated with more night-waking episodes and, accordingly, with a less efficient sleep pattern.

Consistent with the findings of Carey (1974), Sadeh, Lavie, and Scher (1994), Scher et al. (1992), Van Tassel (1985), and others, the present results demonstrated a link between temperament and sleep difficulties. As previously reported in non-referred infants, the association between fussy

temperament and reported sleep difficulties was significant. Similar to the results obtained with one-year-olds (Scher, 2001), in the present group of 10-month-olds, difficult temperament correlated with going to sleep later and sleeping for fewer hours (schedule index). The level of fussiness was linked to mothers' reports of night-waking as well as to the number of recorded night-wakings. Overall, fussiness was moderately correlated with less efficient sleep, as measured with actigraphy. This result lends further support to the contention that the link between the child's temperament and sleep should not be attributed to reporter bias *per se* (Scher et al., 1998). Moreover, given that 8-month fussiness was significantly correlated with 10-month sleep measurements, and since infants' temperament characteristics are fairly stable (Rothbart, 1981), the short-term predictive validity of the child's fussiness should be pointed out.

In the context of the question addressed in the present study pertaining to the role of mothers' separation anxiety, the temperament data was quite revealing in that it highlighted that the contribution of mothers' separation concerns to explaining the variance in their children's sleep was independent of the perceived fussiness. After controlling for temperament, separation anxiety accounted for a small (9%) but significant variance of the sleep efficiency and the night-waking scores. In showing that the child's temperament and the mother's anxiety made unique contributions to the child's sleep-wake regulation, the present study lends further support to models of sleep behavior that combine child and family factors (e.g., Sadeh & Anders, 1993; Jenni & O'Connor, 2005).

Another contribution of the present data set is that it showed that mothers' own separation anxiety, rather than their perceived child's distress, was associated with sleep quality, as objectively recorded. This finding is important as it suggests that the caregiving needs of the parents may be responsible for the maintenance, possibly across time, of fragmented sleep more than the perceived psychological distress of the infant itself. This contention is in line with longitudinal data set (Scher, 1995) that revealed that mothers' separation anxiety at three months was not associated with the infant's sleep pattern but served to predict night-waking six months later. Unfortunately, the design of the present study does not allow testing of how parents' cognitions and feelings may have modulated their child's sleep across time. A challenge for a future investigation is to follow up the interplay between parents' psychological state, their nighttime behavior, and the child's sleep from early infancy to the latter part of the first year and beyond.

With respect to the second hypothesis of the study predicting positive association between maternal separation anxiety and nighttime parenting, it was

found that mothers who were 'active/physical' comforters (Morrell & Cortina-Borja, 2002) reported higher separation anxiety compared to the mothers of the 'autonomous' settlers. It should be underscored that mothers' own separation anxiety, rather than the child's distress, was linked to mothers' involvement in regulating the infant to sleep. This finding is interesting in light of a complementary finding that it was the child's distress rather than the mothers' that showed association with night-waking. Toselli, Fareneti, and Salzarulo (1998), who studied maternal ideas about the causes of awakenings, found that whereas early in infancy hunger and physical discomfort were the prevailing motives, at 12 months psychological reasons, such as needing company or having a bad dream, were a common explanation of why the child wakes up. In the present study, it was shown that mothers who attributed night-waking to fears, as compared to physical discomfort, assigned higher levels of separation anxiety to their child. This finding is in accord with George and Solomon (1999) caregiving model which underscores the interplay between the child's need to be protected and the complementary parental need to provide protection. The biological function of the caregiving system is to provide protection, thus when the parent perceives a situation as frightening, dangerous, or stressful for the child – action follows.

In conclusion, at 10 months of age, night-waking was associated with higher levels of maternal separation anxiety. Together with the finding that the child's fussiness was also a predictor of interrupted sleep, the present data are in accord with a multi-factor transactional model of sleep (e.g., Anders, Goodlin-Jones & Sadeh, 2000). A clear methodological strength of the study is the objective assessment of the child's sleep, as obtained with actigraphy; the lack of observational data pertaining to nighttime parenting is among the shortcomings of the present study. One contribution of the present results was identifying possible triggers of nighttime parenting by comparing mothers' view of their own anxiety when separated from the infant with their perception of the child's distress. Although the design of the study did not allow for the testing of directional explanations, the finding that even when controlling for a child's fussy temperament, maternal separation anxiety predicted night-waking, lends further support to the premise that the mother's separation anxiety serves as a modulator of the child's sleep (Scher & Blumberg, 1999). It is recommended that future sleep studies add behavioral measures of the nighttime interactions, examine the role of mothers' feelings and cognitions at different developmental stages, and across different cultural contexts, as well as compare the role of mothers' state of mind in shaping children's sleep among non-referred and sleep-disturbed infants.

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