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Coparenting and bedtime settling difficulties in infants and toddlers: A pilot cross-sectional study from Türkiye

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Abstract

Coparenting refers to how caregivers coordinate, support, and manage disagreement/conflict in raising a child, and may be particularly salient during bedtime routines that require predictability and shared coordination. This cross-sectional exploratory pilot study examined associations between coparenting dimensions and infant/toddler sleep outcomes in a clinical sample from Türkiye. Families with infants/toddlers aged 0–36 months were recruited consecutively from a general child and adolescent psychiatry outpatient clinic at Eskişehir City Hospital between 01 October 2025 and 10 January 2026. Mothers completed the Expanded Brief Infant Sleep Questionnaire (BISQ-E), and both parents completed the Coparenting Relationship Scale (CRS). Primary analyses were prespecified age-adjusted partial correlations (partial r) controlling for child age, focusing on parent-mean CRS scores and three bedtime/settling outcomes. Of 40 consenting families, 30 completed all measures and comprised the analytic sample (mean child age 23.6 ± 8.8 months; 60% male). Most children room-shared with parents (76.7%), and 63.3% of parents perceived their child's sleep as at least some degree of a problem despite generally favorable night sleep quality ratings. In the age-adjusted parent-mean model, later bedtime routine start time was associated with higher coparenting conflict (partial $r = 0.590$; $q = 0.011$) and undermining (partial $r = 0.469$; $q = 0.039$), and with lower coparenting support (partial $r = -0.485$; $q = 0.038$). More frequent sleep-onset difficulties were associated with higher coparenting conflict (partial $r = 0.499$; $q = 0.038$). Greater coparenting disagreement was moderately associated with greater bedtime difficulty (partial $r = -0.438$) but did not survive BH-FDR correction ($q = 0.052$). In exploratory parent-specific models, paternal exposure to conflict was additionally associated with more frequent night wakings (partial $r = 0.436$). These pilot findings suggest that coparenting functioning may be more consistently linked to bedtime/settling processes than to sleep maintenance in early childhood, supporting larger longitudinal, dyadic studies incorporating child temperament and parental distress indicators.

Keywords: Coparenting, bedtime settling difficulties, infant sleep, parenting, conflict, support

Introduction

Early childhood is a critical period for emotional, physiological, and social development [1]. During infancy and toddlerhood, sleep regulation and family-level processes related to sleep may represent key determinants of developmental functioning, with potential long-term implications [2-4]. Infant sleep is a fundamental indicator of neurophysiological maturation and emerging emotion regulation, which are essential for mental well-being [5-8]. Initially fragmented and irregular in the early months, infant sleep patterns typically become more consolidated after the first half of the first year of life. Nevertheless, night awakenings, sleep-onset difficulties, and the need for parental

intervention may persist through the first year and beyond in a subset of children [9,10]. Importantly, infant sleep quality is not solely determined by biological rhythms; it is also closely related to parental behaviors, family stress, and broader caregiving dynamics, including coparenting functioning [11].

At the same time, the way parents coordinate and collaborate in caregiving may shape the predictability and quality of the child's daily routines [12,13]. In this context, coparenting quality may contribute to bedtime routines, settling processes, and infants' developing self-regulation capacities. Coparenting refers to the ways in which caregivers coordinate and support each other in child-rearing, including collaboration, shared responsibility,

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endorsement of the partner's parenting role, and the extent of conflict or undermining behaviors [14]. Particularly in infancy, coparenting may indirectly influence development by increasing caregiving consistency, parental sensitivity, and stability in everyday caregiving practices [15]. However, despite the relevance of both constructs, studies examining infant sleep and coparenting processes together remain limited.

Bedtime settling is a coordination-intensive family window: parents often negotiate the timing and structure of routines, respond to child resistance, and align on soothing versus limit-setting strategies. When coparenting support and endorsement are high, this may be associated with more predictable routines and mutually reinforcing responses, potentially corresponding to earlier routine initiation and fewer settling difficulties. Conversely, coparenting conflict, undermining, or disagreement may co-occur with greater inconsistency and heightened bedtime strain, which could be reflected in later routine timing and more frequent sleep-onset difficulties [3,9,16-18].

Sleep practices and bedtime ecology show meaningful cross-cultural variation, and parental nighttime behaviors may partly reflect culturally shaped expectations about infant proximity and caregiving [19]. In Turkish samples, active settling strategies such as rocking and feeding/breastfeeding are commonly reported bedtime practices, and a substantial proportion of parents perceive sleep problems in the first two years of life [20-22]. Additionally, room-sharing appears frequent in infancy, and bed-sharing prevalence varies across Turkish studies, suggesting that parental involvement at sleep onset and during night awakenings may often be embedded in close parent–infant sleep arrangements [20-22]. Such practices may increase the salience of coparenting processes during bedtime routines, because coordinated responses and consistent limit-setting may be related to settling trajectories and parental perceptions of sleep difficulties. In addition, across Türkiye-based clinic and community samples, early childhood sleep problems have been linked to caregiver well-being [23,24]. This underscores the clinical relevance of early sleep difficulties for parental mental health and caregiver burden, and motivates examining coparenting as a family-level correlate.

The present study had two aims: (1) a hypothesis-driven examination of whether coparenting domains are associated with bedtime/settling indicators, and (2) an exploratory assessment of associations with sleep maintenance and parent-rated sleep problems and perceived sleep quality. We hypothesized that higher coparenting support/endorsement would be associated with earlier routines and fewer settling difficulties, whereas higher exposure to conflict/undermining and poorer coparenting agreement would be associated with later routines and greater settling difficulties. Given the pilot design and limited covariate assessment, we conceptualized analyses as preliminary and hypothesis-generating. Mother- and father-reported coparenting scores, as well as parent-mean scores, were examined to generate preliminary dyadic evidence in a Turkish clinical context.

Material and Methods

Study Design and Setting

This cross-sectional, exploratory pilot study examined associations between coparenting relationship dimensions and infant/toddler sleep outcomes. Data were collected in the child and adolescent psychiatry outpatient clinics of Eskişehir City Hospital, Türkiye, between 01 October 2025 and 10 January 2026. The clinic is a general child psychiatry outpatient service (i.e., not a dedicated sleep clinic); families attend primarily for developmental, behavioral, and parent–child relational concerns.

Participants and Procedure

Families with infants/toddlers aged 0–36 months attending the clinic during the recruitment period were approached consecutively in the waiting area by the research team. Families were approached regardless of presenting complaint, and recruitment was not restricted to sleep-related visits. Eligibility was checked via brief parent interview and chart review.

During the recruitment period, N = 40 eligible families were approached and n = 40 provided consent (participation rate = 100%). Of these, n = 30 families fully completed all study measures (completion rate = 75%), and analyses were conducted on this complete-case analytic sample (n = 30). The remaining n = 10 families who withdrew before completion had incomplete questionnaires and were not included in analyses.

Primary reasons for clinic attendance in the analytic sample (n = 30) were: behavioral/emotional regulation concerns/psychiatric consultation (n = 14), anger/irritability and hyperactivity concerns (n = 8), language development delay (n = 5), appetite/feeding concern (n = 1), and sibling relationship problems (n = 2). Sleep concerns were not required for participation.

Inclusion criteria were: (i) infant/toddler age 0–36 months; (ii) mother and father (or two primary caregivers) living with the child; (iii) both caregivers able to complete self-report measures in Turkish; and (iv) written informed consent provided by both caregivers. Exclusion criteria were: (i) major neurological disorder (e.g., epilepsy, cerebral palsy); (ii) severe chronic medical illness likely to affect sleep (e.g., chronic cardiopulmonary disease); (iii) known genetic syndrome or major congenital anomaly; (iv) history of prematurity (< 37 gestational weeks) or NICU admission > 7 days; and (v) current use of medications with prominent effects on sleep.

After obtaining informed consent, the second author introduced the study and supervised the completion of the questionnaire. Questionnaires were completed during the clinic visit in a private room, under the researcher's supervision. Mothers completed the Expanded Brief Infant Sleep Questionnaire (BISQ-E). Both mothers and fathers completed the Coparenting Relationship Scale (CRS) independently, using separate forms. For the analytic sample (n = 30), there were no item-level missing data in the variables used for analyses.

As a pilot study, the sample size was determined by feasibility and clinic flow, and no a priori power calculation was performed.

To contextualize precision, a post hoc sensitivity analysis indicates that with $n = 30$, the study had approximately 80% power ($\alpha = .05$, two-tailed) to detect correlations of about $|r| = 0.47$, suggesting limited ability to detect smaller associations.

Ethical Considerations

The study was approved by the Eskişehir City Hospital Scientific Research Ethics Committee (Approval No: 11/09/2025). Written informed consent was obtained from both parents prior to participation. The study procedures were conducted in accordance with the Declaration of Helsinki.

Measurement Tools

Expanded Brief Infant Sleep Questionnaire (BISQ-E) – Turkish version: Infant sleep was assessed using the Expanded Brief Infant Sleep Questionnaire (BISQ-E), a parent-report screening tool designed for infants and toddlers aged 0–3 years [25]. The BISQ-E evaluates core sleep parameters, including nocturnal and daytime sleep duration, number of night awakenings, nocturnal wakefulness duration, bedtime/sleep onset time, settling time (sleep onset latency), and sleep context variables (e.g., sleep location and method of falling asleep). The Turkish version was based on the published translation by Boran et al. [26], which used translation/back-translation procedures and demonstrated good test–retest reliability over a 3-week interval (Spearman $r = 0.63$ – 0.82 across core sleep parameters, all $p < .001$). Because BISQ-E items represent distinct sleep indicators rather than a single composite score, internal consistency indices (e.g., Cronbach's alpha) are not applicable. In the present study, BISQ-E variables were analyzed at the child level. For ease of interpretation, BISQ-E variables were coded so that higher values reflect more sleep difficulty/poorer sleep, unless otherwise stated. Specifically, higher values indicate later bed/routine times, longer sleep onset latency (settling time), more night awakenings, and longer nocturnal wakefulness. The single item on bedtime difficulty is reverse-scored such that lower values indicate greater bedtime difficulty, and the parent-perceived sleep problem item was reverse-coded such that higher values indicate less perceived sleep problem severity. Night sleep quality rating was coded so that higher scores indicate better sleep quality.

Coparenting Relationship Scale (CRS) – Turkish form: Coparenting was assessed with the Coparenting Relationship Scale (CRS), originally developed as a multidomain self-report measure of coparenting functioning [14]. The CRS was translated into Turkish by Çetin (2020) and obtained for research use with permission from the International Center for Coparenting Policy and Research (ICOPAR) [27]. The Turkish CRS supports a six-domain structure (excluding the closeness domain) and includes 25 items across six subscales: Coparenting Agreement (3 items), Coparenting Support (5 items), Coparenting Undermining (5 items), Endorsement of Partner's Parenting (5 items), Exposure to Conflict (5 items), and Division of Labor (2 items). Items are rated on a 7-point scale (0 = not true of us to 6 = very true of us), while Exposure to Conflict uses a 7-point frequency format (0 = never to 6 = very often). In the Turkish adaptation, internal consistency coefficients ranged from $\alpha = .62$ to $\alpha = .81$ for major

subscales, with the two-item Division of Labor reported via inter-item correlation [27]. Cross-national evidence also supports the multidomain CRS structure across diverse contexts [28].

In the present sample, internal consistency was examined separately for mothers and fathers and interpreted descriptively due to the pilot sample size. In mothers ($N = 30$), Cronbach's alpha values were .63 (Agreement), .73 (Support), .60 (Undermining), .63 (Endorsement), and .80 (Exposure to Conflict). In fathers ($N = 30$), alpha values were .56 (Agreement), .81 (Support), .58 (Undermining), .69 (Endorsement), and .85 (Exposure to Conflict). The two-item Division of Labor domain showed weak coherence in mothers ($r = -.15$) and modest coherence in fathers ($r = .34$); therefore, Division of Labor was not retained as a composite score in analyses. Agreement items were reverse-scored so that higher scores reflected lower coparenting agreement (greater disagreement). Higher CRS scores reflect more of the measured coparenting construct. Thus, higher Support and Endorsement indicate more positive coparenting, whereas higher Undermining and Exposure to Conflict indicate more negative coparenting. Agreement items were reverse-scored so that higher scores indicate lower agreement (greater disagreement).

Statistical Analyses

Statistical analyses were conducted using SPSS version 22.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics are presented as mean $\pm$ SD, median (range), or n (%) in Tables 1 to 3. Due to the small sample size and the ordinal/non-normal distribution of several BISQ-E and CRS variables, unadjusted associations between coparenting domains and infant sleep outcomes were examined using Spearman rank-order correlations (ρ) and are presented in Supplementary Tables S1–S2. Given developmental heterogeneity across the 0–36-month age range, age-adjusted partial correlations controlling for child age were prespecified as the primary analyses and are reported in the main text. Primary analyses focused on parent-mean CRS scores and the three prespecified bedtime/settling outcomes (Table 4). Mother- and father-specific age-adjusted models were treated as secondary exploratory analyses (Table 5). Because partial correlations in SPSS are computed using Pearson's r , age-adjusted associations are reported as partial Pearson correlations (partial r). Bedtime/settling indicators (routine start time, bedtime difficulty, and frequency of sleep-onset difficulties) were treated as primary outcomes, while sleep maintenance indices and parent-rated sleep problem perception were considered secondary/exploratory. To support interpretation, effect sizes were described using conventional thresholds ($|r|$ or $|\rho| = 0.10$ – 0.29 small, 0.30 – 0.49 moderate, ≥ 0.50 large). To mitigate inflation of Type I error in the primary parent-mean bedtime/settling analyses, Benjamini–Hochberg false discovery rate (BH-FDR) correction was applied across the 15 planned tests (5 coparenting domains $\times$ 3 primary bedtime outcomes); remaining analyses were interpreted as exploratory and hypothesis-generating. To contextualize sample size, a post hoc sensitivity analysis indicated that with $N = 30$, two-tailed $\alpha = .05$, and 80% power, the minimum detectable correlation was $|r| = 0.47$, indicating limited power for small-to-moderate associations. All tests were two-tailed.

Results

Sample Characteristics

Table 1 presents sample characteristics. The sample consisted of 30 infants/toddlers (mean age 23.6 months, SD 8.8, range 7–36), 60% male (n = 18) and 40% female (n = 12). Mean marriage duration was 6.3 years (SD 4.5, range 2–20). Mothers had a mean

age of 31.4 years (SD 6.3, range 23–44); 53.3% were employed (n = 16), and most had a university education (60.0%, n = 18). Fathers had a mean age of 34.3 years (SD 6.2, range 26–47); all fathers were employed (100%). Most pregnancies were reported as intended (28/30, 93.3%). Nearly all parents reported being in their first marriage (29/30, 96.7%). Regarding family structure, most children had no siblings (19/30, 63.3%).

Table 1. Infant, parent, and family characteristics (N = 30 triads)

Variable	Descriptive statistics
Infant age (months)	Mean 23.6 ± 8.8; median 24; range 7–36
Infant sex	Male 18 (60.0%); Female 12 (40.0%)
Intended pregnancy	Yes 28 (93.3%); No 2 (6.7%)
Parents’ first marriage	Yes 29 (96.7%); No 1 (3.3%)
Siblings (count)	0: 19 (63.3%); 1: 7 (23.3%); 2: 3 (10.0%); 3: 1 (3.3%)
Marriage duration (years)	Mean 6.3 ± 4.5; median 5; range 2–20
Mother age (years)	Mean 31.4 ± 6.3; median 29; range 23–44
Mother education	Middle school 2 (6.7%); High school 8 (26.7%); University 18 (60.0%); Postgraduate 2 (6.7%)
Mother employment	Employed 16 (53.3%); Not employed 14 (46.7%)
Father age (years)	Mean 34.3 ± 6.2; median 31.5; range 26–47
Father education	Primary school 2 (6.7%); High school 15 (50.0%); University 9 (30.0%); Postgraduate 4 (13.3%)
Father employment	Employed 30 (100%)

Values are n (%) unless otherwise stated

Evaluation of Infant Sleep with BISQ-E

Table 2 presents BISQ-E evaluation. Most infants/toddlers slept in the parents’ room (76.7%, n = 23), and the most common sleep surface was a crib (43.3%, n = 13), followed by the child’s own bed (33.3%, n = 10) and the parents’ bed (23.3%, n = 7). Sleep position was most frequently reported as side-lying (50.0%, n = 15), with 30.0% sleeping prone (n = 9) and 20.0% supine (n = 6). Snoring was uncommon outside of upper respiratory infections: 43.3% of parents reported snoring only during colds (n = 13), 26.7% reported occasional snoring (n = 8), and persistent snoring was reported in one child (3.3%), while 26.7% reported no snoring (n = 8).

Bedtime routines were reported on 3–4 nights per week in half of the sample (50.0%, n = 15), while 13.3% reported a routine every night (n = 4); 10.0% reported no routine (n = 3). The routine typically started at a median time of 21:30 (range 19:00–24:00). The most frequently reported bedtime behaviors included hugging (46.7%, n = 14), bathing (46.7%, n = 14), brushing teeth (43.3%, n = 13), and rocking (43.3%, n = 13). Regarding sleep initiation, 46.7% (n = 14) fell asleep while being rocked, 33.3% (n = 10) during breastfeeding, and 23.3% (n = 7) while being held in arms. A total of 33.0% fell asleep in their own bed with a parent in the room (n = 10), whereas 16.7% fell asleep alone in their own bed (n = 5).

Bedtime was rated as neutral in 40.0% of cases (n = 12), easy/very easy in 33.4% (n = 10), and difficult/very difficult in 26.7% (n = 8). Sleep onset latency was most commonly reported as 16–

30 minutes (40.0%, n = 12), followed by 6–15 minutes (23.3%, n = 7), 31–60 minutes (20.0%, n = 6), and > 60 minutes (16.7%, n = 5). Difficulties falling asleep occurred at least weekly in the majority of infants, with 46.7% experiencing sleep-onset difficulties on 1–2 nights per week (n = 14) and 13.3% experiencing difficulties every night (n = 4).

Night waking was frequent, with 46.7% of parents reporting awakenings every night (n = 14) and an additional 20.0% reporting awakenings on 1–2 nights per week (n = 6). The mean number of night wakings was 2.33 per night (SD 2.22; median 2; range 0–10). The duration of nighttime wakefulness averaged 0.86 hours (SD 1.05; median 0.35; range 0–4), and the longest uninterrupted sleep period was 6.34 hours on average (SD 3.36; range 1–13). Total sleep duration was 9.12 hours per 24 hours on average (SD 1.67; range 5–12). Most children napped once per day (63.3%, n = 19), with a mean of 1.43 naps/day (SD 0.82; median 1; range 0–4).

During night awakenings, the most common soothing responses were breastfeeding to return the infant to sleep (40.0%, n = 12), waiting briefly to see if the child resettled (33.3%, n = 10), patting/soothing without picking up (30.0%, n = 9), bringing the child to the parent’s bed (30.0%, n = 9), and offering a pacifier (26.7%, n = 8). Finally, most parents rated their child’s night sleep quality as good or very good (60.0%, n = 18), while 23.3% rated it as quite poor or very poor (n = 7). Overall, 63.3% of parents perceived their child’s sleep as at least some degree of a problem (40.0% small problem; 23.3% very serious problem).

Table 2. Infant sleep characteristics and sleep-related practices (BISQ-E) (N = 30)

Variable	Summary
A. Sleep setting and physiology	
Sleep location (room)	Parents' room 23 (76.7%); Own room 7 (23.3%)
Sleep surface (most often)	Crib 13 (43.3%); Own bed 10 (33.3%); Parents' bed 7 (23.3%)
B. Bedtime/settling	
Bedtime routine frequency (nights/week)	None 3 (10.0%); 1–2 nights 3 (10.0%); 3–4 nights 15 (50.0%); 5–6 nights 5 (16.7%); Every night 4 (13.3%)
Routine start time	Median 21:30; range 19:00–24:00 (mean ≈ 22:00)
Sleep onset latency (minutes) = higher score reflects longer latency	≤5: 0; 6–15: 7 (23.3%); 16–30: 12 (40.0%); 31–60: 6 (20.0%); > 60: 5 (16.7%) Mean 3.30 ± 1.02; median 3.00; range 2–5
Sleep-onset difficulty frequency = higher score reflects more frequent difficulty	Every night 4 (13.3%); 5–6 nights/week 4 (13.3%); 3–4 nights/week 4 (13.3%); 1–2 nights/week 14 (46.7%); 1–3/month 3 (10.0%); < 1/month 1 (3.3%) Mean 4.63 ± 1.33; median 4.00; range 2–7
Bedtime difficulty = lower score reflects more difficulty	Very easy 2 (6.7%); Somewhat easy 8 (26.7%); Neutral 12 (40.0%); Somewhat difficult 6 (20.0%); Very difficult 2 (6.7%) Mean 3.07 ± 1.01; median 3.00; range 1–5
C. Night disruption	
Night waking frequency = higher score reflects more frequent night waking	Every night 14 (46.7%); 5–6 nights/week 1 (3.3%); 3–4 nights/week 5 (16.7%); 1–2 nights/week 6 (20.0%); 1–3/month 1 (3.3%); < 1/month 2 (6.7%); Never 1 (3.3%) Mean 5.37 ± 1.83; median 5.50; range: 1–7
Night wakings per night (count) = higher score reflects more wakings per night	Mean 2.33 ± 2.22; median 2; range 0–10
Nighttime wakefulness (hours)	Mean 0.86 ± 1.05; median 0.35; range 0–4
Longest uninterrupted sleep (hours)	Mean 6.34 ± 3.36; median 5.15; range 1–13
Total sleep duration (hours/24h)	Mean 9.12 ± 1.67; median 9.00; range 5–12
D. Parental perception of infant sleep	
Night sleep quality rating = higher score reflects better night sleep quality rating	Very good 4 (13.3%); Good 14 (46.7%); Quite good 5 (16.7%); Quite poor 4 (13.3%); Very poor 3 (10.0%) Mean 4.30 ± 1.42; median 5.00; range: 1–6
Overall child sleep problem = higher scores reflect lower sleep problem severity	Very serious 7 (23.3%); Small problem 12 (40.0%); Not a problem 11 (36.7%) Mean 1.87 ± 0.78; median: 2.00; range: 1–3
Values are n (%) unless otherwise stated; Higher scores indicate later timing (routine start time) and more frequent difficulties (sleep-onset difficulty frequency; night waking frequency); Bedtime difficulty is reverse-coded (lower = greater difficulty); Overall child sleep problem is reverse-coded (higher = less perceived severity); Night sleep quality rating: higher = better quality	

Coparenting Relationships Scale assessment

Mothers and fathers reported high levels of coparenting support and endorsement, with mean subscale scores above 5 on a 0–6

metric. Negative coparenting domains were low in both parents (undermining and exposure to conflict means < 1.2). Coparenting agreement showed greater variability across families (Table 3).

Table 3. Coparenting Relationship Scale (CRS) subscale scores in mothers and fathers (N = 30 triads)

CRS domain (0–6)	Mothers Mean ± SD	Median	Min – Max	Fathers Mean ± SD	Median	Min – Max	Parents Mean ± SD	Median	Min – Max
Agreement	2.77 ± 1.70	2.67	0.00 – 5.67	2.43 ± 1.56	2.17	0.00 – 6.00	2.60 ± 1.36	2.50	0.00 – 5.50
Support	5.25 ± 1.01	5.60	2.20 – 6.00	5.25 ± 0.94	5.50	2.40 – 6.00	5.25 ± 0.91	5.50	2.30 – 6.00
Undermining	0.72 ± 0.97	0.20	0.00 – 3.40	0.89 ± 1.01	0.80	0.00 – 3.40	0.80 ± 0.85	0.60	0.00 – 2.80
Endorsement	5.20 ± 0.84	5.40	3.00 – 6.00	5.41 ± 0.70	5.60	3.20 – 6.00	5.30 ± 0.66	5.45	3.10 – 6.00
Exposure to Conflict	1.16 ± 0.99	0.80	0.00 – 3.40	1.17 ± 1.13	0.80	0.00 – 3.80	1.17 ± 0.99	0.85	0.00 – 3.40
Scores range 0–6; Agreement is reverse-coded (higher = lower agreement / greater disagreement); For other domains, higher scores indicate more of that feature (Support/Endorsement = more positive coparenting; Undermining/Exposure to Conflict = more negative coparenting)									

Associations Between Coparenting and Infant Sleep

Primary analyses (age-adjusted partial correlations controlling for infant age; Table 4) suggested that coparenting domains were more consistently associated with bedtime/settling indicators than with sleep maintenance outcomes. In the parent-mean model, exposure to conflict showed a large positive association with later routine start time (partial $r = 0.590$) and a moderate-to-large association with more frequent sleep-onset difficulties (partial $r = 0.499$). Coparenting support showed a moderate-to-large inverse association with routine start time (partial $r = -0.485$), and coparenting undermining showed a moderate-to-large positive association with later routine start time (partial $r = 0.469$).

After BH-FDR correction across the 15 prespecified parent-mean bedtime/settling tests (5 coparenting domains $\times$ 3 bedtime

outcomes), the associations of routine start time with conflict ($q = 0.011$), support ($q = 0.038$), and undermining ($q = 0.039$), and the association of sleep-onset difficulty frequency with conflict ($q = 0.038$) remained statistically significant. The inverse association between lower coparenting agreement (greater disagreement) and worse bedtime difficulty was moderate in size (partial $r = -0.438$) but did not survive BH-FDR ($q = 0.052$).

Age-adjusted mother- and father-specific models (Table 5) showed broadly similar patterns, with both maternal and paternal exposure to conflict relating to later routines and more frequent sleep-onset difficulties (moderate-to-large effects). Paternal exposure to conflict was additionally associated with more frequent night wakings (partial $r = 0.436$). For completeness and transparency, unadjusted bivariate correlations are provided in Supplementary Tables S1 and Table S2.

Table 4. Parent-mean CRS scores and age-adjusted partial Pearson correlations (partial r) controlling for infant age (n = 30)

CRS domain	Bedtime/settling			Night disruption			Parental perception	
	Routine start time	Sleep-onset difficulty (freq)	Bedtime difficulty	Night wakings (freq)	Night awake duration	Night sleep time	Night sleep quality rating	Overall child sleep problem
Agreement †	0.178	0.211	-0.438*	0.059	0.010	-0.340	0.265	-0.154
Support	-0.485**	-0.053	0.215	-0.169	0.194	-0.050	0.039	-0.014
Undermining	0.469*	0.205	-0.171	0.069	0.009	-0.289	0.324	-0.321
Endorsement	-0.397*	-0.173	0.278	-0.130	0.326	-0.109	0.022	-0.031
Conflict	0.590**	0.499**	-0.325	0.329	0.207	-0.325	-0.013	0.074

n = 30; $p < .05^*$, $p < .01^{**}$ (two-tailed); Values are partial Pearson correlations (partial r) controlling for infant age; † Agreement is reverse-coded: higher scores reflect lower coparenting agreement (i.e., “worse agreement”); For the BISQ-E routine start time item, higher values reflect later times; For the BISQ-E bedtime difficulty item, lower scores indicate greater difficulty (reverse-coded); For night sleep quality rating, higher scores indicate better sleep quality; For the BISQ-E “overall child sleep problem” item, higher scores indicate less perceived sleep problem severity (reverse-coded)

Table 5. Mother and father CRS scores and BISQ-E partial correlations adjusted for infant age (n = 30)

CRS subscale	Bedtime/settling			Night disruption			Parental perception	
	Routine start time	Sleep-onset difficulty (freq)	Bedtime difficulty	Night wakings (freq)	Night awake duration	Night sleep time	Night sleep quality rating	Overall child sleep problem
Agreement (mother) †	0.128	0.079	-0.356	0.113	0.024	-0.320	0.170	-0.136
Support (mother)	-0.467*	-0.098	0.172	-0.147	0.297	-0.043	-0.107	0.126
Undermining (mother)	0.369*	0.127	-0.046	-0.112	0.009	-0.165	0.406*	-0.425*
Endorsement (mother)	-0.383*	-0.367	0.365	-0.015	0.299	-0.092	0.048	-0.112
Conflict (mother)	0.477**	0.509**	-0.380*	0.166	0.220	-0.319	-0.003	0.032
Agreement (father) †	0.170	0.283	-0.372*	-0.024	-0.009	-0.242	0.277	-0.119
Support (father)	-0.435*	0.003	0.232	-0.169	0.054	-0.051	0.193	-0.164
Undermining (father)	0.439*	0.225	-0.245	0.223	0.007	-0.330	0.160	-0.136
Endorsement (father)	-0.290	0.114	0.085	-0.228	0.257	-0.096	-0.016	0.076
Conflict (father)	0.624**	0.437*	-0.241	0.436*	0.174	-0.294	-0.020	0.103

n = 30; $p < .05^*$, $p < .01^{**}$ (two-tailed); Values are partial Pearson correlations (partial r) controlling for infant age; † Agreement is reverse-coded: higher scores reflect lower coparenting agreement (i.e., “worse agreement”); For the BISQ-E routine start time item, higher values reflect later times; For the BISQ-E bedtime difficulty item, lower scores indicate greater difficulty (reverse-coded); For night sleep quality rating, higher scores indicate better sleep quality; For the BISQ-E “overall child sleep problem” item, higher scores indicate less perceived sleep problem severity (reverse-coded)

Discussion

In this exploratory pilot clinical sample of infants and toddlers from Türkiye, coparenting dimensions were more consistently associated with bedtime/settling indicators than with sleep maintenance parameters. In the prespecified age-adjusted primary analyses using parent-mean coparenting scores (Table 4), higher exposure to coparenting conflict was associated with later routine start time and more frequent sleep-onset difficulties, whereas higher coparenting support was associated with earlier routine timing; undermining also related to later routine timing. In secondary exploratory mother- and father-specific models (Table 5), broadly similar patterns were observed, and paternal exposure to conflict was additionally associated with more frequent night wakings. Given the study design and limited covariate assessment, these findings should be interpreted as correlational and hypothesis-generating rather than indicative of directionality or mechanism.

One cautious interpretation is that bedtime/settling may be a context in which coparenting dynamics and sleep-related behaviors co-occur in particularly detectable ways, because bedtime routines often involve coordination between caregivers and consistency across nights [16-18]. However, alternative explanations are plausible. For example, unmeasured child and family characteristics, such as temperament, developmental status, parental distress, and broader family stress, may influence both bedtime settling and coparenting dynamics, limiting our ability to evaluate the independence of observed associations. Accordingly, the present findings are best viewed as preliminary signals to be tested in future work.

Our findings are broadly consistent with prior evidence linking coparenting quality to infant sleep outcomes [29] and with perspectives suggesting transactional, bidirectional associations between parenting processes and infant sleep regulation [30]. More generally, work on parenting and infant sleep highlights the potential relevance of routines and caregiver responses in early sleep difficulties [9], although the present study cannot adjudicate these pathways.

The findings may also be interpreted within the context of common sleep-related caregiving practices in Türkiye, including frequent room-sharing and active settling strategies (e.g., rocking or feeding to sleep) [20-22]. In such arrangements, bedtime can represent a shared caregiving task, potentially increasing the salience of coparenting coordination around settling. Prior Turkish studies also underscore the relevance of parental psychological well-being for parent-perceived sleep problems and insomnia severity in infants/toddlers [23,24]. Although Turkish evidence has largely emphasized maternal factors, broader literature indicates that fathers' sleep, involvement, and mental health are also relevant [31,32]. In this context, the father-specific exploratory associations observed here may be informative for future hypothesis-driven studies.

Several limitations should be considered. First, this was a small convenience pilot sample ($N = 30$) recruited in a clinical setting, which may introduce selection bias and limits precision. The study was powered primarily to detect relatively large associations (minimum detectable $|r| = 0.47$); therefore, smaller, non-significant associations should not be considered definitive and need further studies. Second, the cross-sectional design precludes causal inference, and bidirectional associations between family processes and sleep difficulties are plausible [30]. Moreover, there was no control/comparison group, and recruitment from a child psychiatry outpatient setting may limit generalizability to community samples.

In our study, infant/toddler sleep outcomes were based on maternal report on BISQ-E and were not corroborated by objective measures (e.g., actigraphy). In addition, several relevant contextual and clinical variables were not assessed and may confound associations between coparenting and sleep. Socioeconomic status was characterized using parental education and employment; however, household income and a composite SES index were not collected, limiting our ability to examine SES-related gradients. In addition, beyond eligibility screening and exclusion criteria, we did not conduct standardized assessments of child temperament, developmental status, breastfeeding status, or family stress/broader family functioning, all of which can influence bedtime settling and parental dynamics. Also, we did not assess parental depression/anxiety or related distress indicators, which may influence both coparenting and parent-perceived sleep problems [23,24]. Further studies should aim to model these variables in larger samples.

Finally, the study involved multiple statistical tests. Although we reduced multiplicity by prespecifying age-adjusted primary analyses and applying BH-FDR correction across the planned primary bedtime/settling tests, the remaining exploratory analyses still carry potential Type I error risk; therefore, findings should be interpreted cautiously and prioritized by effect size magnitude, consistency, and replication.

Despite these limitations, the present findings may offer preliminary guidance for future research and clinical hypothesis generation. For example, bedtime settling difficulties may be usefully conceptualized as embedded within broader family-level functioning, including coparenting dynamics, and future work can test whether interventions focusing on bedtime coordination and coparenting communication are associated with improved settling outcomes.

Conclusion

In this exploratory pilot clinical sample from Türkiye, coparenting dimensions were more consistently related to bedtime/settling indicators than to sleep maintenance parameters. Higher exposure to coparenting conflict, higher undermining in coparenting relationships, and lower support were associated with later routine start times. In addition, conflict was also associated with more frequent sleep-onset difficulties in the age-

adjusted primary analyses. Paternal exposure to conflict was also associated with more frequent night wakings in exploratory models. These findings do not establish directionality and should be interpreted as hypothesis-generating given the small sample size, absence of a control group, cross-sectional design, limited clinical and psychosocial characterization (including lack of temperament and parental distress measures), and the broader risk of Type I error despite BH-FDR correction in primary analyses. Larger longitudinal studies incorporating child temperament and parental depression/anxiety indicators, broader family functioning, and dyadic approaches are needed to clarify whether and how coparenting and early sleep difficulties are linked over time.

Ethical Approval

The study was approved by the Eskişehir City Hospital Scientific Research Ethics Committee (Approval No: 11/09/2025). The study procedures were conducted in accordance with the Declaration of Helsinki.

Patient Consent

Written informed consent was obtained from both parents prior to participation.

Conflict of Interest

The authors confirm the absence of any conflicts associated with this work.

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