CURRENT ISSUES IN PERSONALITY PSYCHOLOGY · 2026
DOI: HTTPS://DOI.ORG/10.5114/CIPP/237454

ORIGINAL ARTICLE

Adult attachment style and mental health are associated with disturbed sleep in mothers co-sleeping with their children

Kinga Burdalska[A,B,C,D,E,F], *Marta Jackowska* [A,D,E]

Faculty of Psychology, SWPS University, Sopot, Poland

BACKGROUND
Co-sleeping is common among mothers of young children, but its implications for maternal well-being remain controversial. The present study investigated whether attachment style, maternal mental health, and co-sleeping frequency predict sleep disturbances among mothers who co-sleep with children aged 0-5 years.

PARTICIPANTS AND PROCEDURE
A cross-sectional survey was completed by 672 mothers (mean age 31 ± 4.82 years), who regularly co-sleep with their children aged 0-5 years. Participants completed three questionnaires – the Athens Insomnia Scale, the General Health Questionnaire-12, and the Experiences in Close Relationships – and provided information on the number of children they had.

RESULTS
Maternal mental health emerged as the strongest predictor of disturbed sleep, followed by insecure attachment styles (anxious and avoidant). The number of children predicted greater sleep disturbances only in the context of anxious attachment. Although co-sleeping frequency was not an independent predictor of disturbed sleep, sensitivity analyses indicated that mothers who co-slept consistently or infrequently with their child reported better sleep and mental health outcomes than those with irregular co-sleeping routines.

CONCLUSIONS
These findings suggest that poorer mental health, insecure attachment, and inconsistent sleep routines may be associated with poorer maternal sleep quality. Further research is needed to determine whether psychological resilience, stable routines, and access to support may help improve maternal sleep, mental health, and overall quality of early caregiving.

KEY WORDS
psychological distress; sleep quality; maternal attachment style; co-sleeping; bed-sharing

CORRESPONDING AUTHOR – Kinga Burdalska, Faculty of Psychology, SWPS University, Polna 16/20, 81-745 Sopot, Poland, e-mail: Burdalska.kin@gmail.com

AUTHORS' CONTRIBUTION – A: Study design · B: Data collection · C: Statistical analysis · D: Data interpretation · E: Manuscript preparation · F: Literature search · G: Funds collection

TO CITE THIS ARTICLE – Burdalska, K., & Jackowska, M. (2026). Adult attachment style and mental health are associated with disturbed sleep in mothers co-sleeping with their children. *Current Issues in Personality Psychology.*

RECEIVED 24.04.2025 · REVIEWED 17.03.2026 · ACCEPTED 17.09.2026 · ONLINE PUBLICATION 03.11.2026

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0). License (http://creativecommons.org/licenses/by-nc-sa/4.0/)
Copyright © Institute of Psychology, University of Gdansk

BACKGROUND

Sleep is fundamental for physical and mental health, yet a substantial proportion of the general population experiences insufficient or fragmented sleep. In Poland, as in studies from Europe and North America, approximately half of the adult population has disturbed sleep, with a higher prevalence among women than men (Nowicki et al., 2016).

Sleep quality is closely tied to psychological functioning (Hertenstein et al., 2019), and poor sleep has been linked to diminished life satisfaction, negative self-perception, and increased emotional dysregulation. Even a single night of sleep deprivation can lead to declines in mood and cognitive functioning, as well as heightened irritability and aggression (Meerlo et al., 2008).

Mothers of young children are particularly susceptible to sleep disruption, often experiencing fragmented and interrupted sleep due to caregiving demands (Doering & Durfor, 2011). These challenges are especially pronounced among mothers who engage in co-sleeping, understood in the present study as the mother and child sharing the same sleep surface during the night. Although the broader literature sometimes distinguishes co-sleeping from bed-sharing and room-sharing, in the present study both co-sleeping and bed-sharing refer to this arrangement. Co-sleeping practices vary considerably across cultures. While bed-sharing is normative and widely accepted in many Eastern societies, it remains controversial in Western contexts, where pediatric recommendations emphasize safety concerns (Blair et al., 2014). Nonetheless, many mothers choose to co-sleep for reasons of emotional closeness and practical convenience (Ward, 2015).

Another key factor affecting maternal sleep is adult attachment style. Rooted in early caregiver–child interactions, attachment theory describes enduring patterns of emotional closeness and regulation that continue into adulthood (Hazan & Shaver, 1987). Adults with secure attachment styles generally demonstrate greater emotional resilience, effective regulation, and better sleep quality. In contrast, insecure attachment, characterized by anxiety or avoidance, is associated with emotional hyperarousal, dysregulated stress responses, and poorer sleep (Adams et al., 2014). Considering the interplay of these factors, the present study investigates whether co-sleeping frequency, maternal mental health, adult attachment style, and the number of young children are associated with sleep disturbances in mothers of children aged 0-5 years. This study aims to clarify the psychological and relational contributors to maternal sleep quality during early parenthood.

CO-SLEEPING, MATERNAL SLEEP QUALITY, AND MENTAL HEALTH

The prevalence of co-sleeping varies across cultures, ranging from 40-72% in Western countries to over 80% in certain regions of Asia (Mindell et al., 2010). A longitudinal study conducted across 18 countries found that over 80% of infants from predominantly Asian cultures shared a room with their parents throughout this period. In contrast, among primarily Caucasian populations, around 50% of infants slept in the same room as their parents during the initial months, with this figure dropping to approximately 10% by the second year (Mindell et al., 2010).

While organizations such as UNICEF promote co-sleeping to support breastfeeding and foster emotional bonding (Vennemann et al., 2009), pediatric guidelines, including those from the American Academy of Pediatrics, urge caution due to safety concerns, particularly the risk of sudden infant death syndrome (SIDS) in unsafe sleep environments (Blair et al., 2014). Nonetheless, mothers frequently report choosing co-sleeping for practical and emotional reasons, including facilitating nighttime feeding, enhancing emotional closeness, and helping children develop self-soothing abilities (Ward, 2015).

The effects of co-sleeping on maternal sleep are inconclusive. Polysomnographic evidence indicates that co-sleeping mothers experience less deep sleep and more light sleep. However, their nighttime awakenings tend to be shorter than those of mothers who sleep separately (Andre et al., 2021). Longitudinal research tracking families from five weeks to 48 months postpartum found that while co-sleeping children woke more frequently, they returned to sleep more quickly than those sleeping alone (Bennett et al., 2007). Additionally, maternal presence during the night has been shown to promote sleep synchrony between mother and child (McKenna et al., 2007). Mothers also report that co-sleeping supports the development of secure attachment and helps children feel emotionally safe (Ward, 2015).

Furthermore, the frequency and consistency of co-sleeping routines appear to be important for sleep outcomes. Mothers who co-sleep irregularly, often in response to child distress or exhaustion ("reactive co-sleepers"), report poorer sleep quality than those who co-sleep consistently by choice ("early co-sleepers") (Keller & Goldberg, 2004). Further research indicates that a mother's perception of her child's sleep as problematic is associated with reduced sleep quality in the mother herself (Covington et al., 2018).

Mental health and sleep quality are closely interrelated. Epidemiological evidence suggests that over 80% of individuals diagnosed with depression also report sleep disturbances, and sleep disorders are associated with depression, anxiety, and cogni-

tive impairment (Hertenstein et al., 2019). Recent evidence suggests a possible association between bed-sharing and maternal symptoms of depression, anxiety, and stress, although the direction of this relationship remains unclear. Mothers experiencing psychological distress may co-sleep more often as a way to maintain closeness with their child, while those who perceive co-sleeping as problematic may experience greater anxiety due to sleep disruption or increased nighttime caregiving (Vogiatzoglou et al., 2024). Furthermore, exposure to noise during sleep, such as a child's crying, can stimulate the sympathetic nervous system and trigger the release of stress hormones. This physiological response may interfere with the ability to return to sleep, lower overall sleep quality, and contribute to increased morning fatigue (Martire et al., 2020). The findings highlight the need to consider not only the practice of co-sleeping itself, but also the psychological and emotional context within which it occurs.

ATTACHMENT, MENTAL HEALTH, AND SLEEP QUALITY

A further psychological factor implicated in maternal sleep is adult attachment style, which encompasses enduring patterns of emotional bonding and interpersonal regulation. The theory evolved beyond its initial focus on children exposed to trauma, and work by Ainsworth et al. (1978) identified three primary attachment styles: secure, anxious-ambivalent, and avoidant. A secure attachment style reflects the harmonious development of the relationship between child and caregiver. Attachment models formed in childhood tend to remain relatively stable over the life course, though they may gradually evolve (Hazan & Shaver, 1987).

Early interactions with caregivers play a critical role in shaping lifelong stress regulation (Maunder & Hunter, 2001). Individuals with secure attachment typically experience lower levels of perceived stress, while those with insecure styles, including anxious and avoidant attachment, often display elevated cortisol levels, which may negatively impact sleep (Kidd et al., 2011). Despite growing interest in this area, research on the relationship between attachment style and sleep remains limited. Early research found that mothers of infants with sleep problems exhibited insecure attachment styles (Benoit et al., 1992). Similarly, another study reported a link between insecure attachment and sleep disturbances in third-grade children (El-Sheikh et al., 2007). In contrast, research involving preschoolers found that secure attachment was associated with better sleep quality (Vaughn et al., 2011).

Among adults, anxious attachment has been associated with poorer sleep, particularly in those in romantic relationships, while secure attachment is linked to better sleep. However, the evidence does not support the hypothesis that the attachment style of one partner can influence the sleep quality of the other (Adams et al., 2014). Additionally, little is known about how the number of children affects maternal sleep, especially among mothers co-sleeping with their youngest child.

In summary, existing evidence suggests that secure attachment is associated with better sleep and may also be associated with enhanced emotional resilience. In contrast, insecure attachment styles, characterized by anxiety or avoidance, appear to increase susceptibility to both sleep disturbances and psychological distress. This association may be especially pronounced among mothers, for whom disrupted sleep combined with elevated stress levels can further heighten vulnerability to mental health difficulties.

SUMMARY AND HYPOTHESES

Maternal sleep may be influenced by a multitude of psychological and caregiving-related factors, including co-sleeping practices, maternal mental health, and attachment style. While some evidence points to potential risks associated with co-sleeping, particularly in the context of maternal distress, other studies suggest neutral or context-dependent outcomes. The interplay between co-sleeping, maternal psychological functioning, and attachment style remains underexplored. Given the probable overlap, the present study aimed to investigate whether co-sleeping frequency, maternal mental health, and adult attachment style were independently associated with higher sleep disturbances among mothers of young children. Additionally, we explored the association between the number of children and mothers' sleep.

It was hypothesized that greater sleep disturbances would be associated with higher levels of anxious and avoidant attachment, poorer mental health, more frequent co-sleeping, and a greater number of children.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

Participants were N = 672 mothers, with an average age of 31 years, who were currently engaged in co-sleeping with at least one child aged between 0 and 5 years. The study was conducted via an anonymous online survey. Participants were recruited using a convenience sampling method through links posted on Instagram, Facebook, and online parent-

ing forums. The study received ethical approval from the Research Ethics Committee at the Faculty of Psychology, SWPS University, Sopot, Poland.

PROCEDURE

Prior to giving consent, participants were informed about the study, its voluntary nature, the confidentiality of responses, and the right to withdraw at any time. The survey commenced with demographic questions, followed by psychometric scales.

MEASURES

Background measures. Participants gave details regarding their age, the number and age of their children, the frequency of co-sleeping, their place of residence, educational background, and relationship status. In the present study, co-sleeping referred to the mother and child sharing the same sleep surface during the night.

Sleep disturbances. Sleep disturbances were ascertained with the Polish adaptation of the Athens Insomnia Scale (AIS), an 8-item self-reported questionnaire designed to assess insomnia symptoms over the past month (Fornal-Pawłowska et al., 2011). Each item was rated on a 4-point scale ranging from 0 (*no problem*) to 3 (*severe difficulty*), with higher scores indicating greater sleep disturbance. Additionally, based on the cutoff values described by Okajima et al. (2020), we divided participants into good sleepers (≤ 5) and those with elevated sleep disturbances (≥ 6). The internal consistency of the scale was good (Cronbach's $\alpha = .83$).

Mental health. Mental health was measured with the General Health Questionnaire (GHQ-12) using the validated Polish adaptation of the 12-item scale (e.g. Ucieklak-Jeż, 2009). Responses were evaluated on a 4-point scale (ranging from *better than usual* to *much worse than usual*) and scored using the 0-0-1-1 method, with higher total scores indicating poorer mental well-being. In the current sample, internal consistency was high (Cronbach's $\alpha = .89$).

Attachment style. Attachment style was indexed using the validated Polish adaptation of the 36-item scale, the Experiences in Close Relationships – Revised (ECR-R; Lubiewska et al., 2016). The scale assesses adult attachment patterns along two dimensions: attachment anxiety (items 1-18) and attachment avoidance (items 19-36). Each item was rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores reflecting greater attachment insecurity. In the current sample, internal consistency was excellent (Cronbach's $\alpha = .94$ for anxiety and $\alpha = .91$ for avoidance).

RESULTS

SAMPLE CHARACTERISTICS

The majority of participants had a degree, resided in urban areas, and had one (56.5%) or two children (34.4%) (see Table 1). The majority of children with whom mothers reported co-sleeping were under one year of age (35.6%), followed by children aged one (27.2%) and two (15.9%); 74.6% of mothers reported co-sleeping on a nightly basis, 15.6% reported co-sleeping several times per week, and 9.8% reported co-sleeping once a week or less. The sample demonstrated an average AIS score of 6.54 ($SD = 3.88$), with a mean GHQ-12 score of 2.64 ($SD = 3.88$).

STATISTICAL ANALYSIS

All statistical analyses were conducted using IBM SPSS Statistics software (version 29). Three distinct analyses were conducted: bivariate correlations, hierarchical regressions, and a one-way analysis of variance (ANOVA).

CORRELATIONS

Zero-order Pearson correlations showed that greater sleep disturbances were associated with poorer mental health and higher levels of anxious and avoidant attachment. A higher number of children was also associated with greater psychological distress and more disturbed sleep, although these associations were weaker (see Table 2).

HIERARCHICAL REGRESSION ANALYSES

We conducted two separate hierarchical regression analyses to determine whether maternal mental health, co-sleeping frequency, and the number of young children explained additional variance in sleep disturbances beyond that provided by attachment styles. The first hierarchical regression included anxious attachment style, and Table 3 presents the standardized regression coefficients (β), adjusted R^2, and change in R^2 (ΔR^2). In Step 1, anxious attachment was entered into the equation ($R^2_{adjusted} = .13$, $F(1, 670) = 104.65$, $p < .001$), and approximately 13% of the variance in maternal sleep disturbances was explained by this predictor. In Step 2, maternal mental health (GHQ-12) was added to the model ($R^2_{adjusted} = .34$, $F(2, 669) = 175.36$, $p < .001$), and its inclusion improved the model, which accounted for 34% of the variance in maternal sleep. In Step 3, co-sleeping frequency was included in the analysis ($R^2_{adjusted} = .34$, $F(3, 668) = 116.73$, $p < .001$), but the amount of vari-

Table 1

Descriptive statistics of study variables

	Frequencies (%) or means (*SD*)		Frequencies (%) or means (*SD*)
Age	31.09 (4.82)	Education	
Relationship status		Primary education	3 (0.4)
Single	24 (3.6)	Secondary education	183 (27.2)
In a relationship	648 (96.4)	Higher education	486 (72.3)
No. of children under 5 years old		Weekly frequency of co-sleeping	
1	459 (68.3)	Every night	501 (74.6)
2	196 (29.2)	A few times a week	105 (15.6)
3	16 (2.4)	Once a week or less	66 (9.8)
4	1 (0.1)	Nighttime co-sleeping duration	
No. of children		Part of the night	325 (48.4)
1	380 (56.5)	Whole night	347 (51.6)
2	231 (34.4)	Mental health (GHQ-12, range 0-12)	2.64 (3.88)
3	52 (7.7)	Mental health (GHQ-12, binary division)	
4	7 (1.0)	0-1	59 (8.8)
5	2 (0.3)	2-3	368 (54.8)
Age of the child a mother co-sleeps with		≥ 4	245 (36.5)
under 1	239 (35.6)	Sleep disturbance (range 0-24)	6.54 (3.9)
1	183 (27.2)	Sleep disturbance (binary division)	
2	107 (15.9)	≤ 5	397 (59.1)
3	66 (9.8)	≥ 6	275 (40.9)
4	47 (7.0)		
5	30 (4.5)		

Note. $^{*}p < .001$, $^{**}p < .05$.

Table 2

Intercorrelations between study variables (N = 672)

Variable	1	2	3	4	5	*M*	*SD*
1. Sleep disturbances	–	.58*	.37*	.29*	.11**	6.54	3.88
2. Mental health	.58*	–	.52*	.38*	.10**	2.64	3.88
3. Anxious attachment style	.37*	.52*	–	.60*	–.03	52.82	23.29
4. Avoidant attachment style	.29*	.38*	.60*	–	.03	53.54	17.55
5. Number of children 0-5	.11**	.10**	–.03	.03	–	1.35	0.54

Note. $^{*}p < .001$, $^{**}p < .05$.

ance explained remained unchanged. In the final step (Step 4), the number of children aged 0-5 was added and became a significant, albeit very small, predictor, and the explained variance remained at 34% ($R^2_{adjusted}$ = .34, $F(4, 667) = 89.08$, $p < .001$).

The second hierarchical regression analysis was conducted to examine the role of avoidant attachment in explaining maternal sleep disturbance (see Table 4). In Step 1, avoidant attachment was entered into the equation ($R^2_{adjusted}$= .08, $F(1, 670) = 61.24$,

Table 3

Summary of hierarchical regression analysis with anxious attachment style predicting sleep disturbances (N = 672)

Variable	Step 1 β	Step 2 β	Step 3 β	Step 4 β
Anxious attachment style	.37*	.09**	.09**	.10**
Mental health		.53*	.53*	.52*
Co-sleeping frequency			.00	.01
Number of children 0-5				.07**
$R^2_{adjusted}$	.13	.34	.34	.34
ΔR^2	.14*	.21*	.00	.00**

Note. *$p < .001$, **$p < .05$.

Table 4

Summary of hierarchical regression analysis with avoidant attachment style predicting sleep disturbances (N = 672)

Variable	Step 1 β	Step 2 β	Step 3 β	Step 4 β
Avoidant attachment style	.29*	.08**	.08**	.08**
Mental health		.55*	.55*	.54*
Co-sleeping frequency			.01	.01
Number of children 0-5				.06
$R^2_{adjusted}$	.08	.34	.34	.34
ΔR^2	.08*	.26*	.00	.00

Note. *$p < .001$, **$p < .05$.

$p < .001$), explaining 8% of the variance in maternal sleep disturbances. In Step 2, maternal mental health (GHQ-12) was included in the model ($R^2_{adjusted} = .34$, $F(2, 669) = 174.83$, $p < .001$), which substantially improved it, with the predictors jointly explaining 34% of the variance in maternal sleep disturbances. In Step 3, co-sleeping frequency was added to the equation ($R^2_{adjusted} = .34$, $F(3, 668) = 116.39$, $p < .001$), but the amount of variance explained remained unchanged. In the final step (Step 4), the number of children aged 0-5 was introduced into the model, but it did not significantly increase the explained variance, which remained at 34% ($R^2_{adjusted} = .34$, $F(4, 667) = 88.52$, $p < .001$).

Across both hierarchical models, maternal mental health accounted for the largest increase in explained variance in sleep disturbances. Co-sleeping frequency did not improve model fit in either analysis. The number of children contributed only modestly and only in the model including anxious attachment.

SENSITIVITY ANALYSES

An ANOVA was conducted to examine group differences in sleep and mental health based on co-sleeping frequency. The analysis revealed significant differences for both sleep disturbances ($F(2, 669) = 3.52$, $p = .030$) and mental health ($F(2, 669) = 6.86$, $p = .001$). Post hoc comparisons (Tukey HSD) revealed that mothers who co-slept daily reported significantly less disturbed sleep ($M = 6.33$, $SD = 3.86$) than those who co-slept several times a week ($M = 7.41$, $SD = 3.88$), $p = .028$. No significant differences were found between daily and infrequent co-sleepers ($M = 6.77$, $SD = 3.86$), $p = .884$. Regarding maternal mental health, the analysis showed that mothers who co-slept daily reported significantly better psychological well-being ($M = 2.36$, $SD = 3.26$) than those who co-slept several times per week ($M = 3.58$, $SD = 3.70$), $p = .002$. No significant differences were found between daily and infrequent co-sleepers ($M = 3.23$, $SD = 3.53$), $p = .148$.

DISCUSSION

The present study hypothesized that greater sleep disturbances would be associated with higher levels of anxious and avoidant attachment, poorer mental health, more frequent co-sleeping, and a greater number of children. Among all variables examined,

poor mental health emerged as the strongest factor associated with disturbed sleep, followed by insecure attachment (anxious or avoidant). While co-sleeping frequency was not a significant independent factor, the number of children was associated with sleep difficulties, but only among mothers with anxious attachment. These findings underscore the multifactorial nature of maternal sleep functioning and highlight the relevance of individual psychological factors during early caregiving.

Our results are consistent with previous studies highlighting a close association between psychological functioning and sleep quality. However, the present findings should be interpreted with caution, as the cross-sectional design does not allow the temporal direction of these associations to be determined. Poor mental health may contribute to disturbed sleep, but persistent sleep disruption may also worsen emotional functioning and psychological well-being. These relationships are therefore likely to be at least partly bidirectional (Staner, 2010). In the context of co-sleeping, mothers who perceived their child's sleep as problematic reported poorer sleep quality, especially when bed-sharing. These mothers slept up to 51 minutes less than those who did not report such concerns (Covington et al., 2018). In our sample, 36.5% of the mothers met the GHQ-12 cut-off for psychological distress (Goldberg, 2001), and 40.9% scored above the clinical threshold on the Athens Insomnia Scale (Okajima et al., 2020), indicating a substantial prevalence of psychological distress and elevated sleep disturbances in this sample.

Adult attachment style was also significantly associated with maternal sleep disturbances, but its contribution was smaller than that of maternal mental health. Although the link between insecure attachment and poor sleep is well established, fewer studies have examined this association in early motherhood. Research has shown that infants of insecurely attached mothers tend to exhibit more disrupted sleep (Benoit et al., 1992), and insecurely attached adults also report lower sleep quality (El-Sheikh et al., 2007). Anxious individuals tend to experience nighttime arousal and heightened reactivity, while avoidant individuals may face challenges in seeking support, which may disrupt sleep (Mikulincer & Bucholtz, 1995).

The number of young children a mother had was associated with greater sleep difficulties, but only among mothers with anxious attachment. Having more children may be associated with greater maternal stress, particularly for individuals lacking emotional support (Qian et al., 2021). Anxiously attached individuals are also less likely to benefit from available social resources, potentially amplifying stress and sleep disturbances (Mikulincer & Bucholtz, 1995).

Mothers who co-slept with their child either consistently or infrequently reported better sleep outcomes and better psychological well-being than those with irregular co-sleeping patterns. Although the present study did not assess maternal decisions concerning co-sleeping directly, this finding may be consistent with Keller and Goldberg's (2004) distinction between those who choose co-sleeping from the outset, and those who resort to it in response to child sleep difficulties. Irregular child sleep routines may contribute to maternal fatigue and disturbed sleep (Komada et al., 2009), potentially accounting for the poorer sleep quality and greater psychological distress observed among irregular co-sleepers in our study.

The meaning of sleep and co-sleeping may also vary across cultural contexts (Ou et al., 2025). In settings where it is normative, mothers may be less likely to perceive it as problematic, whereas in cultures that emphasize solitary sleep it may be associated with greater stress or ambivalence. Cultural values may therefore shape both sleep arrangements and maternal perceptions of sleep quality and well-being.

Our findings need to be interpreted in light of several limitations. The cross-sectional design precludes causal inferences, and all variables were assessed using self-report measures, which may have introduced reporting bias and increased the risk of common method variance. Future studies would benefit from combining questionnaire data with objective sleep monitoring (e.g. actigraphy) and/or prospective sleep diaries.

Although the regression coefficients were statistically significant, some were modest, and the explained variance in sleep disturbances was only moderate, suggesting that other unmeasured factors may have also contributed to these findings. In addition, our sample was predominantly university educated, which limits the generalizability of the findings, and we did not assess whether co-sleeping reflected a deliberate parenting choice or a reactive response to child sleep difficulties.

CONCLUSIONS

Co-sleeping remains a common practice among mothers of young children, yet its effects on maternal sleep remain debated. In our study, maternal mental health and adult attachment style emerged as stronger factors associated with sleep disturbances than co-sleeping frequency, suggesting that internal psychological processes may play a greater role in sleep disturbances than situational behaviors. Mothers who co-slept either consistently or infrequently reported better sleep and psychological well-being than those with irregular routines, suggesting an association between caregiving consistency and maternal well-being. In contrast, irregular co-sleeping patterns were associated with poorer outcomes and may

reflect a more reactive form of nighttime caregiving. Further research is needed to determine whether psychological resilience, stable routines, and access to support may help improve maternal sleep, mental health, and the overall quality of early caregiving.

Disclosures

This research received no external funding.
The study was approved by the Research Ethics Committee at the Faculty of Psychology, SWPS University, Sopot, Poland (Approval No. WKE/S2024/21/11/159).
The authors declare no conflict of interest.

References

Adams, G. C., Stoops, M. A., & Skomro, R. P. (2014). Sleep tight: Exploring the relationship between sleep and attachment style across the life span. *Sleep Medicine Reviews, 18*, 495–507. https://doi.org/10.1016/j.smrv.2014.03.002

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: a psychological study of the strange situation*. Lawrence Erlbaum Associates.

Andre, C. J., Lovallo, V., & Spencer, R. M. C. (2021). The effects of bed sharing on sleep: From partners to pets. *Sleep Health, 7*, 314–323. https://doi.org/10.1016/j.sleh.2020.11.011

Bennett, D. S., Côté, S. M., Clifford, J., Seguin, J. R., & Tremblay, R. E. (2007). Maternal sensitivity and sleep problems in infancy: a longitudinal study. *Infant Behavior and Development, 30*, 782–791. https://doi.org/10.1016/j.infbeh.2007.01.002

Benoit, D., Zeanah, C. H., Boucher, C., & Minde, K. K. (1992). Sleep disorders in early childhood: Association with insecure maternal attachment. *Journal of the American Academy of Child & Adolescent Psychiatry, 31*, 86–93. https://doi.org/10.1097/00004583-199201000-00013

Blair, P. S., Sidebotham, P., Pease, A., & Fleming, P. J. (2014). Bed-sharing in the absence of hazardous circumstances: Is there a risk of sudden infant death syndrome? An analysis from two case-control studies conducted in the UK. *PLoS One, 9*, e107799. https://doi.org/10.1371/journal.pone.0107799

Covington, L. B., Armstrong, B., & Black, M. M. (2018). Perceived toddler sleep problems, co-sleeping, and maternal sleep and mental health. *Journal of Developmental & Behavioral Pediatrics, 39*, 238–245. https://doi.org/10.1097/DBP.0000000000000535

Doering, J. J., & Durfor, S. L. (2011). The process of "persevering toward normalcy" after childbirth. *MCN: The American Journal of Maternal/Child Nursing, 36*, 258–265. https://doi.org/10.1097/NMC.0b013e31821826e7

El-Sheikh, M., Buckhalt, J. A., Keller, P. S., Cummings, E. M., & Acebo, C. (2007). Child emotional insecurity and academic achievement: The role of sleep disruptions. *Journal of Family Psychology, 21*, 29. https://doi.org/10.1037/0893-3200.21.1.29

Fornal-Pawłowska, M., Wołynczyk-Gmaj, D., & Szelenberger, W. (2011). Walidacja Ateńskiej Skali Bezsenności [Validation of the Polish version of the Athens Insomnia Scale]. *Psychiatria Polska, 45*, 211–221.

Goldberg, D. P. (2001). *A user's guide to the General Health Questionnaire* (Polish translation). Instytut Medycyny Pracy im. prof. J. Nofera (Original work published 1978)

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511–524. https://doi.org/10.1037/0022-3514.52.3.511

Hertenstein, E., Feige, B., Gmeiner, T., Kienzler, C., Spiegelhalder, K., Johann, A., Jansson-Fröjmark, M., Palagini, L., Rücker, G., Riemann, D., & Baglioni, C. (2019). Insomnia as a predictor of mental disorders: a systematic review and meta-analysis. *Sleep Medicine Reviews*, *43*, 96–105. https://doi.org/10.1016/j.smrv.2018.10.006

Keller, M. A., & Goldberg, W. A. (2004). Co-sleeping: Help or hindrance for young children's independence? *Infant and Child Development, 13*, 369–388. https://doi.org/10.1002/icd.365

Kidd, T., Hamer, M., & Steptoe, A. (2011). Examining the association between adult attachment style and cortisol responses to acute stress. *Psychoneuroendocrinology, 36*, 771–779. https://doi.org/10.1016/j.psyneuen.2010.10.014

Komada, Y., Adachi, N., Matsuura, N., Mizuno, K., Hirose, K., Aritomi, R., & Shirakawa, S. (2009). Irregular sleep habits of parents are associated with increased sleep problems and daytime sleepiness of children. *The Tohoku Journal of Experimental Medicine, 219*, 85–89. https://doi.org/10.1620/tjem.219.85

Lubiewska, K., Glogowska, K., Mickiewicz, K., Wojtynkiewicz, E., Izdebski, P., & Wisniewski, C. (2016). Skala Experience in Close Relationships-Revised: Struktura, rzetelność oraz skrócona wersja skali w polskiej próbie [The Experiences in Close Relationships-Revised questionnaire: Factorial structure, reliability and a short version of the scale in a Polish sample]. *Psychologia Rozwojowa, 21*, 49–63. https://doi.org/10.4467/20843879PR.16.004.4793

Maunder, R. G., & Hunter, J. J. (2001). Attachment and psychosomatic medicine: developmental contributions to stress and disease. *Biopsychosocial Science and Medicine*, *63*, 556–567. https://doi.org/10.1097/00006842-200107000-00006

Martire, V. L., Caruso, D., Palagini, L., Zoccoli, G., & Bastianini, S. (2020). Stress & sleep: a relationship lasting a lifetime. *Neuroscience & Biobehav-*

ioral Reviews, 117, 65–77. https://doi.org/10.1016/j.neubiorev.2019.08.024

McKenna, J. J., Ball, H. L., & Gettler, L. T. (2007). Mother–infant cosleeping, breastfeeding and sudden infant death syndrome: What biological anthropology has discovered about normal infant sleep and pediatric sleep medicine. *American Journal of Physical Anthropology, 134*, 133–161. https://doi.org/10.1002/ajpa.20736

Meerlo, P., Sgoifo, A., & Suchecki, D. (2008). Restricted and disrupted sleep: Effects on autonomic function, neuroendocrine stress systems and stress responsivity. *Sleep Medicine Reviews, 12*, 197–210. https://doi.org/10.1016/j.smrv.2007.07.007

Mikulincer, M., & Bucholtz, I. (1995). Effects of adult attachment style on the perception and search for social support. *The Journal of Psychology, 129*, 665–676. https://doi.org/10.1080/00223980.1995.99149

Mindell, J. A., Sadeh, A., Wiegand, B., How, T. H., & Goh, D. Y. T. (2010). Cross-cultural differences in infant and toddler sleep. *Sleep Medicine, 11*, 274–280. https://doi.org/10.1016/j.sleep.2009.04.012

Nowicki, Z., Grabowski, K., Cubala, W. J., Nowicka-Sauer, K., Zdrojewski, T., Rutkowski, M., & Bandosz, P. (2016). Prevalence of self-reported insomnia in general population of Poland. *Psychiatria Polska, 50*, 165–173. https://doi.org/10.12740/PP/58771

Okajima, I., Miyamoto, T., Ubara, A., Omichi, C., Matsuda, A., Sumi, Y., Matsuo, M., Ito, K., & Kadotani, H. (2020). Evaluation of severity levels of the Athens Insomnia Scale based on the criterion of Insomnia Severity Index. *International Journal of Environmental Research and Public Health, 17*, 8789. https://doi.org/10.3390/ijerph17238789

Qian, G., Mei, J., Tian, L., & Dou, G. (2021). Assessing mothers' parenting stress: Differences between one- and two-child families in China. *Frontiers in Psychology, 11*, 609715. https://doi.org/10.3389/fpsyg.2020.609715

Ou, C., Lou, N. M., Maheshka, C., Shi, M., Takemura, K., Cheung, B., & Heine, S. J. (2025). Healthy sleep durations appear to vary across cultures. *Proceedings of the National Academy of Sciences of the United States of America, 122*, e2419269122. https://doi.org/10.1073/pnas.2419269122

Staner, L. (2010). Comorbidity of insomnia and depression. *Sleep Medicine Reviews, 14*, 35–46. https://doi.org/10.1016/j.smrv.2009.09.003

Ucieklak-Jeż, P. (2009). Ocena przeciętnej długości życia w dobrym zdrowiu psychicznym na przykładzie Polski [Assessment of life expectancy in good mental health on the example of Poland]. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 73*, 145–160.

Vaughn, B. E., El-Sheikh, M., Shin, N., Elmore-Staton, L., Krzysik, L., & Monteiro, L. (2011). Attachment representations, sleep quality, and adaptive functioning in preschool-age children. *Developmental Psychology, 47*, 1445–1456. https://doi.org/10.1037/a0025201

Vennemann, M. M., Bajanowski, T., Brinkmann, B., Jorch, G., Yucesan, K., Sauerland, C., & Mitchell, E. A. (2009). Sleep environment risk factors for sudden infant death syndrome: The German sudden infant death syndrome study. *Pediatrics, 123*, 1162–1170. https://doi.org/10.1542/peds.2008-0505

Vogiatzoglou, M., Iliadou, M., Antoniou, E., Andersson, E., Mrvoljak-Theodoropoulou, I., Dagla, C., Sotiropoulou, D., Tsolaridou, E., Orovou, E., & Dagla, M. (2024). Exploring the relationship between co-sleeping, maternal mental health and expression of complaints during infancy, and breastfeeding. *Healthcare, 12*, 1278. https://doi.org/10.3390/healthcare12131278

Ward, T. C. S. (2015). Reasons for mother–infant bed-sharing: a systematic narrative synthesis of the literature and implications for future research. *Maternal and Child Health Journal, 19*, 675–690. https://doi.org/10.1007/s10995-014-1557-1