Exposure to parental interpartner conflict in adolescence predicts sleep problems in emerging adulthood

Ryan J. Kelly, PhD\textsuperscript{a,b,c}, Morgan J. Thompson, PhD\textsuperscript{b}, Mona El-Sheikh, PhD\textsuperscript{b}

\textsuperscript{a}Department of Individual, Family and Community Education, University of New Mexico, Albuquerque, New Mexico, USA
\textsuperscript{b}Department of Human Development and Family Science, Auburn University, Auburn, Alabama, USA

\textbf{ARTICLE INFO}

\textbf{Article history:}
Received 11 December 2023
Received in revised form 13 June 2024
Accepted 22 June 2024

\textbf{Keywords:}
Actigraphy
Young adulthood
Longitudinal
Family risk
Marital aggression

\textbf{ABSTRACT}

Objectives: Parental interpartner conflict is a highly prevalent form of family risk that is stressful for adolescents with ramifications for their sleep. Multiple studies have demonstrated that adolescents from high-conflict homes are at risk for sleep problems. Building on this literature, we conducted novel analyses and investigated whether exposure to interpartner conflict in adolescence predicts sleep problems in the subsequent developmental period of emerging adulthood.

Methods: We used a rigorous four-wave design spanning 8 years (collected between 2012-2020). At wave 1, participants were 245 adolescents from diverse backgrounds (M age = 15.74 years; 67% White/European American, 33% Black/African American; 52% girls). Individuals participated again in their adolescence at wave 2 (M age = 16.77) and wave 3 (M age = 17.69). Participants returned for wave 4 in emerging adulthood (M age = 22.97). Adolescents reported on their parents’ interpartner conflict (intense and frequent conflict). Sleep duration (minutes) and quality (efficiency, long wake episodes) were measured using actigraphy.

Results: After controlling for autoregressive effects and several covariates, findings from a structural equation model revealed that greater exposure to parental interpartner conflict in adolescence predicted reduced sleep efficiency and more long wake episodes in emerging adulthood.

Conclusions: Results build on the literature to consider sleep in the family context and are among the first to illustrate that exposure to parental interpartner conflict in adolescence predicts sleep problems in emerging adulthood. Continued investigations into the antecedents of sleep problems in emerging adulthood may benefit from considering past exposure to family risk.

© 2024 The Author(s). Published by Elsevier Inc. on behalf of National Sleep Foundation. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Parental interpartner conflict (IPC) occurs often. Over 40% of adolescents are exposed to verbal IPC each year\textsuperscript{1} and 22% have witnessed physical IPC.\textsuperscript{2} IPC is stressful for adolescents with ramifications for their sleep. Investigations of sleep in the family context have accumulated\textsuperscript{3,4} and adolescents from high-conflict homes experience insufficient and poor-quality sleep (for a review\textsuperscript{5}). Despite these advances, open questions pertaining to relations between IPC and sleep remain. Few studies have incorporated longitudinal designs to investigate whether adolescents’ exposure to IPC continues to compromise their sleep in later life stages. Research has illustrated that stressful living conditions have downstream effects on sleep and the consideration of family risk including parental IPC is likely to build on this body of work.\textsuperscript{6} We used a rigorous four-wave design spanning 8 years to examine whether exposure to parental IPC (intense and frequent conflict)\textsuperscript{7} in adolescence predicted sleep in the subsequent developmental period of emerging adulthood.

Sleep is multifaceted.\textsuperscript{8} Children’s exposure to family risk compromises their sleep duration and quality.\textsuperscript{9-11} Along this line, we assessed established indicators of sleep duration (minutes) and quality (efficiency, long wake episodes) using actigraphy. Although these facets of sleep often correlate, they represent distinct facets of sleep\textsuperscript{12} and may be differentially impacted by IPC. As such, each was independently examined. Sleep problems refer to short or poor-quality sleep.

Emerging adulthood is a unique developmental period.\textsuperscript{13} Sleep problems commonly observed in adolescence are still prevalent in emerging adulthood.\textsuperscript{14} Sleep represents a critical domain of emerging adults’ health and is related to socioemotional,\textsuperscript{15} academic,\textsuperscript{16} and physical health\textsuperscript{17} functioning. As such, there is a need to identify the antecedents of sleep problems during this developmental period.

Please cite this article as: R.J. Kelly et al., Exposure to parental interpartner conflict in adolescence predicts sleep problems in emerging adulthood, Sleep Health: Journal of the National Sleep Foundation, https://doi.org/10.1016/j.sleh.2024.06.003
Research has shown that negative social dynamics earlier in life (e.g., peer victimization) contribute to emerging adults’ sleep problems. Building on this research, we sought to investigate novel prospective relations between exposure to IPC in adolescence and sleep in emerging adulthood.

Repeated exposure to parental IPC in adolescence may have long-term implications for sleep. At the neurobehavioral level, vigilance is the antithesis of sleep and ceasing awareness of the surrounding environment is needed for sufficient and high-quality sleep. From an evolutionary perspective, the ability to maintain arousal and detect threat in unsafe environments could be adaptive. Based on emotional security theory, children derive their sense of safety from the family including the parental interpartner subsystem. IPC is a major stressor that undermines emotional security, and prospective studies have demonstrated that adolescents become increasingly sensitive and reactive following recurring incidents of discord between their parents; this in turn may carry long-term implications for the downregulation in arousal required for optimal sleep. Further, regardless of levels of IPC in childhood, adolescent worries and security concerns may be heightened by their greater awareness and recognition of adult problems and investigations focused on this developmental period are particularly warranted.

Cross-sectional associations between IPC and adolescents’ sleep problems are established (for a meta-analysis). Although few multi-wave investigations exist, the findings are compelling. Based on adolescent reports, more IPC at age 15 forecasted shorter subjective sleep duration at age 16, which predicted depression symptoms at age 17. In another study, greater mother-reported familial conflict (including IPC) between ages 7 and 15 predicted more insomnia symptoms at age 18. Assessments including objective sleep measures are scarce and mostly specific to earlier developmental periods. For example, more parent-reported IPC at age 8 predicted shorter actigraphy-derived sleep duration and reduced sleep efficiency 2 years later among those more emotionally insecure about the parental relationship. Collectively, sleep problems stemming from parental IPC may persist over time and across developmental periods.

Current study

We examined prospective relations between parental IPC in adolescence (ages 16-18) and sleep in emerging adulthood (age 23). Sleep in adolescence was controlled; this approach helped elucidate whether IPC was related to residualized change in sleep from adolescence to emerging adulthood. Adolescents reported on the frequency, intensity, and extent to which their parents resolved conflict. Hostile, frequent, and poorly resolved conflict has received extensive attention in the family literature and is collectively referred to as destructive IPC. Compared to parent-reports, children’s perception of destructive IPC is particularly salient in the prediction of health functioning, including sleep and is particularly relevant to this study.

We hypothesized that greater exposure to IPC in adolescence would forecast more sleep-related problems in emerging adulthood (fewer sleep minutes, reduced sleep efficiency and more long wake episodes). Given the novelty of research questions, we did not hypothesize whether certain facets of sleep would be more greatly impacted.

Methods

Participants

Families were part of an ongoing study examining development in the context of family functioning from childhood to emerging adulthood (Family Stress and Youth Development Study). Data for the present study are drawn from waves 4-7 of the larger investigation (collected between 2012-2020). For clarity, these waves will be referred to by participants’ average age (16-, 17-, 18-, and 23-years-old). At study enrollment (2005-2006), 251 families were recruited through flyers distributed at schools in small towns and semirural communities in Alabama. Families were eligible if two parents were present in the home and had been living together for ≥2 years. Exclusion criteria included children having a chronic physical illness, ADHD or learning disability. Due to attrition, 53 new families were recruited at wave 4 of the larger study (age 16). Participants were drawn from the same school districts as the original sample and there were no differences regarding demographic or primary variables between those recruited at wave 1 vs. wave 4.

The analytical sample at age 16 consisted of adolescents with data for at least one primary variable (n = 245; 52% girls [sex assigned at birth]; M age = 15.74 years, SD = 9.33 months). Youth were from diverse race/ethnic (67% non-Hispanic White/European American [EA], 33% non-Hispanic Black/African American [AA]) and socioeconomic (SES) backgrounds. SES was measured by income-to-needs ratio, which is the quotient of a family’s total income divided by the federal poverty threshold for their household size. At age 16, families were on average middle class (M = 2.40, SD = 1.30; range = 0.14-6.72). Most youth lived with their married biological parents (57%). Among 21% of families, the parents were married, yet at least one parent was not biologically related to the adolescent (biological mother and step-father [18%], extended family [2%], stepmother and biological father [1%]). Further, 22% lived with unmarried parent(s); 10% resided with their unpartnered biological mother, 9% lived with their biological mother and boyfriend, 2% resided with their unpartnered biological father and 1% lived with those with other statuses (e.g., biological mom and girlfriend). In cases of separation, IPC was considered in regard to the past cohabitating partner, unless there was a current cohabitating partner. In analyses, married/not married and unpartnered status were covaried. Nearly all parental interpartner relationships were heterosexual; two couples identified as lesbian.

About 1 year later (M time lag = 367 days; SD = 27.13 days), 226 adolescents participated at age 17 (54% girls; M age = 16.77 years, SD = 9.17 months; 67% EA, 33% AA). Retention from age 16 was good (89%). Nine adolescents who did not participate at age 16, but participated in earlier waves of the larger study, were part of the analytical sample at age 17. Parents’ relationship status did not change for most in the past year (91%); 6% divorced/separated and 3% remarried or had a new live-in partner.

Nearly 1 year after the age 17 assessment (M time lag = 349 days; SD = 20.26 days), 216 adolescents participated at age 18 (55% girls; M age = 17.69 years, SD = 8.90 months; 70% EA, 30% AA). Retention was high from the age 16 (85%) and age 17 waves (94%). Three individuals who were part of the larger study but did not participate at age 16 nor age 17 were part of the analytical sample at age 18. In 95% of cases, parents’ relationship status did not change in the past year; 3% of couples divorced/separated and 2% remarried or had a new live-in partner. In analyses, we controlled for whether couples divorced/separated. At age 18, 93% of adolescents resided at home and 7% lived at college or elsewhere.

Five years later (M time lag = 5 years, SD = 6 months), 189 individuals returned at age 23 (81% retention from age 16, 90% retention from age 17, 89% retention from age 18). To address attrition over previous waves, a new cohort of 45 individuals began participation at age 23. In longitudinal studies, it is not uncommon to recruit participants after the initial wave. This approach includes.

---

*Analyses were also conducted with the exclusion of the small number of youth who lived with extended family (i.e., grandparents, aunt/uncle). The nature of relations between IPC in adolescence and sleep in emerging adulthood did not differ and results are based on the full sample.*
notable benefits such as overcoming decreased statistical power associated with attrition. The new cohort was recruited from the same geographical region and the same inclusion/exclusion criteria were used. In total, 234 emerging adults participated (57% female; \( M = 22.97 \) years; 70% EA, 27% AA, 3% mixed). Most did not live with their parent(s) (91%). Further, 18% were married and 38% were in a dating relationship. Those who began participation at age 23 did not differ on study variables from those who participated in earlier waves. Lastly, participants who dropped from the study did not differ from the age 16 sample on demographic or primary variables.

Procedures

The study was approved by the university’s Institutional Review Board. During the first three waves (ages 16-18), parents provided written consent and assent was obtained from adolescents. At the final wave (age 23), emerging adults provided written consent. At each wave, individuals wore actigraphs at home for seven consecutive nights. During the first three waves, most adolescents were in high school and actigraphy assessments occurred during the school year, excluding holidays. Participants also completed a sleep diary nightly, which was used to corroborate actigraphy data. In most cases, participants visited our on-campus research laboratory within a few days following the last night of actigraphy (across the waves, \( M = 8.55 \) days, \( SD = 8.69 \)). Questionnaires were completed online or in separate lab rooms.

Measures

Parental IPC

At ages 16-18, adolescents reported on parental IPC using the Children’s Perception of Interparental Conflict Scale (CPIC).7 The Frequency (6 items; e.g., ‘I often see or hear my parents arguing), Intensity (7 items; e.g., ‘My parents get really mad when they argue) and Resolution subscales (6 items; e.g., ‘My parents still act mean after they have had an argument) were summed to measure destructive IPC. Responses were scored on a three-point scale (0 = False to 2 = True) and higher scores reflected more destructive IPC. The CPIC may be used for families in which parents are no longer partnered; in such cases, youth are prompted to consider times when parents are together and experience disagreements. Based on t-tests, youth with unpartnered parents did not report less IPC. The CPIC has demonstrated good psychometric properties including test-retest reliability7 and external validity38 (\( rs = 0.93 \) at each wave).

Sleep actigraphy

At each wave, sleep was measured using Octagonal Basic Motionlogger actigraphs (Ambulatory Monitoring) and scored in Action W2 software to derive three parameters. Sleep minutes represents the number of 1-minute epochs scored as sleep between sleep onset and wake time. Sleep efficiency is the percentage of time scored as sleep between sleep onset and wake time (also known as % Sleep in the literature). Long wake episodes is the number of scored wake episodes \( \leq 5 \) minutes. Sadeh’s scoring algorithm was used to score data.34 Definitions are consistent with the manual provided with the actigraphs and software (Ambulatory Monitoring Inc, Ardsley, NY):

Consistent with other work,6,32 actigraphy data were included for those who had \( \geq 3 \) nights; data were treated as missing for those with \(< 3 \) nights (\( n = 0\% - 12\% \) of individuals across the waves). At each wave, day-to-day stability (i.e., \( r \)) across the week of actigraphy was high for sleep minutes (0.70-0.75), sleep efficiency (0.92-0.94), and long wake episodes (0.85-0.89). At each wave, each sleep variable was derived by creating an average across all available nights.

Plan of analysis

A structural equation model (SEM) was fit to examine parental IPC in adolescence as a predictor of sleep in emerging adulthood (sleep minutes, sleep efficiency, long wake episodes) (the SEM is depicted in Fig. 1). SEM has strengths including the ability to account for measurement error and reduce multicollinearity between exogenous variables.33 IPC was stable across ages 16 to 18 years (\( rs = 0.72-0.75 \)) and loaded on a latent construct representing IPC in adolescence. Similarly, sleep minutes (\( rs = 0.43-0.59 \)), sleep efficiency (\( rs = 0.41-0.55 \)) and long wake episodes (\( rs = 0.40-0.54 \)) were correlated across ages 16-18. For each sleep parameter, data from ages 16 to 18 loaded on latent constructs. Overall, primary variables in adolescence were: IPC, sleep minutes, sleep efficiency and long wake episodes, and each was represented by a latent construct. In regard to these latent constructs, the repeated measures were treated as indicators of latent factors that captured between-person variability across the waves.34 Factor loadings for repeated measures surpassed acceptable cutoffs (Fig. 1).35,36 Essentially, the latent predictors captured the mean of each construct across the adolescent time points (i.e., ages 16-18) and the between-person variance of each construct across the adolescent time points. The fitted SEM has notable strengths including that it helped remove time-specific influence as measurement error. Each sleep parameter in emerging adulthood (age 23) was treated as an observed variable.

To account for autoregressive effects, sleep in adolescence was controlled (Fig. 1); this approach provides information about predicted change and reduces bias in parameter estimates.27 All three sleep parameters were included in the same model. In preliminary analyses, separate SEMs were fit for each sleep parameter and findings did not vary compared to the full model. We used \( \Delta y^2 \) tests to determine whether estimated paths between IPC in adolescence and sleep in emerging adulthood resulted in improved model fit. An improvement in fit provides support for the inclusion of the estimated paths.

To reduce outlier effects among primary variables, high-leverage values surpassing 3 SDs from the sample mean were replaced with the highest value observed below 3 SDs.37 Across the waves, no values were recoded for IPC, 6 values were recoded for sleep minutes, 18 were recoded for sleep efficiency and 13 were recoded for long wake episodes. Skew was assessed using skewness and kurtosis statistics (\( \pm 2 \)) as well as visual observation; no variables were adjusted for skew.

We controlled for variables known to correlate with primary constructs, namely child gender18 (\( 1 = \text{boys}, 0 = \text{girls} \)), race/ethnicity (1 = EA, 0 = AA) and SES at age 16.28 Moreover, individuals who are married may experience less IPC than those who are divorced/separated or unpartnered.40 Thus, we controlled for whether parents were married (\( 1 = \text{married}, 0 = \text{not married} \)), unpartnered status at age 16 (\( 1 = \text{had a partner}, 0 = \text{no partner} \)) and whether parents divorced/separated between ages 16 and 18 (\( 1 = \text{divorced/separated}, 0 = \text{did not divorce/separate} \)). Lastly, we controlled for whether children lived with their parents in emerging adulthood, given its possible association with IPC (1 = lived with parents, 0 = did not live with parents).

The SEM was fit using Amos 28. Regarding missing data for IPC, 95% of adolescents reported at age 16, and 94% reported at ages 17 and 18. For sleep, 93% of youth had valid actigraphy data at age 16,
88% at age 17, 94% at age 18 and 100% at age 23. Full-information maximum likelihood (FIML) was used to handle missing data. The amount of missingness was in the acceptable range for FIML. Significantly associated exogenous variables were allowed to covary. Error terms among latent constructs were allowed to correlate within waves. Residual variances among the sleep variables at age 23 were allowed to correlate. The control variables were allowed to predict the sleep parameters at age 23. The model was considered to have an acceptable fit if it satisfied at least two of the following criteria: $\chi^2$/df < 3, comparative fit index (CFI) > 0.90, and root mean square error of approximation (RMSEA) ≤0.08. The model satisfied these criteria.

### Results

**Preliminary analyses**

Descriptive statistics are presented in Table 1 and bivariate correlations are shown in Table 2. Compared to other work that utilized nonclinical samples, averages were similar for IPC and sleep in adolescence and emerging adulthood. Across the three waves in adolescence, 15%-21% of parents engaged in physical IPC (i.e., shoving or pushing). Mean comparisons were conducted to assess whether averages of primary variables differed across waves. Rates of IPC were higher at age 16 than at age 18 ($t[188]=2.53$, $p=.006$).

---

**Table 1**

Means (and standard deviations) among primary study variables over time

<table>
<thead>
<tr>
<th>Variable</th>
<th>(Age 16)</th>
<th>(Age 17)</th>
<th>(Age 18)</th>
<th>(Age 23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parental interpartner conflict</td>
<td>13.22 (9.20)</td>
<td>13.06 (9.76)</td>
<td>12.21 (9.49)</td>
<td>-</td>
</tr>
<tr>
<td>2. Sleep minutes</td>
<td>403.64 (56.28)</td>
<td>400.37 (55.65)</td>
<td>394.40 (60.51)</td>
<td>404.48 (70.08)</td>
</tr>
<tr>
<td>3. Sleep efficiency</td>
<td>90.81 (6.81)</td>
<td>91.50 (6.27)</td>
<td>91.17 (6.84)</td>
<td>93.31 (6.80)</td>
</tr>
<tr>
<td>4. Long wake episodes</td>
<td>2.32 (1.76)</td>
<td>2.21 (1.89)</td>
<td>2.23 (1.85)</td>
<td>1.73 (1.63)</td>
</tr>
</tbody>
</table>

Parental interpartner conflict was not assessed at age 23.
Sleep minutes was greater at age 23 than at age 18 (t[160] = 1.93, p = .03). Sleep efficiency was higher at age 23 than at age 16 (t[166] = 4.86, p < .001), age 17 (t[156] = 4.13, p < .001) and age 18 (t[160] = 4.75, p < .001). Individuals had fewer long wake episodes at age 23 than at age 16 (t[166] = -3.33, p < .001), age 17 (t[156] = -3.48, p < .001), and age 18 (t[160] = -3.94, p < .001).

**Parental IPC in adolescence and sleep in emerging adulthood**

An SEM was fit to assess relations between parental IPC in adolescence and sleep in emerging adulthood, χ²(139) = 173.20, p = .03; χ²/df = 1.25; CFI = 0.99; RMSEA = 0.03; 95% CI [0.01-0.04] (Fig. 1). Several covariates were related to IPC and sleep (not shown in figure to increase clarity). Male was related to fewer sleep minutes in adolescence (B = -4.38, β = -.34, p < .001) and emerging adulthood (B = -20.02, β = -.14, p = .05) as well as reduced sleep efficiency in adolescence (B = -.15, β = .21, p = .01). Black/African American status was associated with more IPC (B = .46, β = .13, p = .05), fewer sleep minutes in adolescence (B = -4.97, β = .06, p < .001) and emerging adulthood (B = -25.52, β = -.07, p = .03), and reduced sleep efficiency in adolescence (B = -.08, β = -.21, p = .008), and increased efficiency and sleep in emerging adulthood (B = -.28, β = -.23, p = .002) and more long wake episodes in adolescence (B = .07, β = .21, p = .005). Divorced status was associated with more IPC (B = .26, β = .18, p = .01).

Autoregressive effects from adolescence to emerging adulthood were significant for each sleep parameter (Fig. 1). More parental IPC in adolescence predicted reduced sleep efficiency (ΔR² = 6%) and more long wake episodes (ΔR² = 5%) in emerging adulthood. Lastly, Δχ² analysis revealed that the inclusion of IPC in adolescence improved model fit, thus providing additional support for its inclusion (Δχ²(df) = 8.29(3), p < .05).

**Discussion**

We examined whether adolescents’ exposure to IPC predicted their sleep in emerging adulthood. We employed a multi-wave design spanning 8 years, used actigraphy to derive sleep variables (minutes, efficiency, long wake episodes), and recruited a diverse sample to enhance representation. Novel findings indicated that greater exposure to IPC in adolescence predicted reduced sleep efficiency and more frequent long-wake episodes in emerging adulthood.

Our findings add to the growing literature to demonstrate associations between parental IPC and children’s sleep problems. Results are among the first to illustrate that exposure to IPC in adolescence may be associated with sleep problems in emerging adulthood. Most individuals did not still live at home in emerging adulthood, and thus sleep problems stemming from IPC may continue despite not residing with parents. We controlled for autoregressive effects (rank order stability in sleep over time) and...
multiple covariates to help further isolate the unique influence of IPC on sleep. Given that IPC occurs often and the fundamental role of sleep in emerging adult development, findings are of importance.

Reasons for the observed relations between IPC and emerging adults’ sleep exist. An appraisal of security is needed to suspend levels of vigilance required for high-quality sleep. Adolescents’ perceived safety partially stems from the emotional security derived from the parental relationship and destructive IPC may interfere with the downregulation in arousal needed for optimal sleep. Moreover, frequent exposure to IPC may reduce adolescents’ subsequent thresholds of sensitivity to family conflict and other social stressors. Through this process, levels of adversity required to evoke feelings of insecurity and emotional reactivity may become increasingly milder, thus elevating the likelihood for sleep problems over time and in emerging adulthood. Null effects at the cross-sectional level are comparable in magnitude observed in other investigations of associations between IPC and sleep. Continued investigations into the antecedents of sleep problems in emerging adulthood may benefit from considering past exposure to family risk.

IPCs predicted sleep quality parameters but not sleep minutes. It is not entirely clear why this pattern emerged, but similar differences between sleep duration and quality have been reported in relation to other forms of family aggression (e.g., harsh parenting). It is possible that emotional insecurity and reactivity associated with IPC may especially interfere with maintaining reduced arousal at night, resulting in frequent wakeings. Further, sleep duration may be particularly shaped by emerging adults’ living circumstances that influence daily schedules and amount of time allotted for sleep (social, academic, work demands) and be less susceptible to disruptions stemming from earlier exposure to family risk.

At the bivariate level, concurrent associations between IPC and adolescents’ sleep were not significant. Findings from related studies have been mixed, such that some demonstrated cross-sectional relations between IPC and sleep problems whereas others reported null effects. The IPC–sleep association is complex and there are likely factors that exaggerate or attenuate risk, and direct relations may not always be apparent. Further, it may take time for sleep problems to manifest after repeated exposure to IPC in adolescence and this may have contributed to null effects at the cross-sectional level.

Prospective investigations of sleep from adolescence to emerging adulthood are scarce and there is a need to better understand changes in sleep across these periods of life. Adolescents who experience sleep problems may continue to have disrupted sleep in emerging adulthood. We discovered a similar pattern such that rank order stability was moderately stable from adolescence to emerging adulthood for sleep duration and quality. Mean comparisons illustrated that sleep improved from adolescence to emerging adulthood, which is consistent with some work. However, sleep has also been shown to worsen on average across the transition. Toward moving the field forward, investigations are needed to better understand individual differences and to clarify why findings have varied across studies.

Results have important implications. Although the standardized coefficients were relatively small, they are comparable in magnitude observed in other investigations of associations between familial risk and sleep. Findings may be relevant to educational programs that inform families and practitioners about the developmental sequelae of IPC.

This study includes limitations. We focused on established sleep parameters, yet others may also be relevant (e.g., sleep stages, chronobiology). Given the community sample and relatively mild IPC and sleep problems observed in our study, results may not generalize to clinical samples. Our study focused on IPC in middle to late adolescence and whether exposure to parental discord during other developmental periods exerts similar effects on emerging adults’ sleep is unknown. For conservative model testing we controlled for many variables that may impact IPC or sleep. Nevertheless, other untested variables could have been influential (e.g., temperament). Lastly, we examined between-person associations that provide important insight into rank order stability, however, they do not indicate how individual fluctuations in levels of IPC and sleep relate over time. Future research that considers within-person associations would be informative.

The present study builds on the literature to consider sleep in the family context and provides novel insight into relations between IPC and sleep. Continued investigations into the antecedents of sleep problems in emerging adulthood may benefit from considering past exposure to family risk.

Funding

This research was supported by Grant R01-HD046795 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (PI: Mona El-Sheikh). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Data availability

Data are not available yet for sharing with others. Per National Institutes of Health data sharing guidelines, they will be available to other scholars at a later date after the completion of this longitudinal study.

Declaration of conflicts of interest

None.

Acknowledgments

We thank our research laboratory staff, particularly laboratory coordinator Bridget Wingo, as well as the adolescents and families who participated.

Author contributions

RJK, MJT, and ME-S conceptualized the paper, contributed to the study design, and prepared the manuscript; RJK and MJT conducted analyses. All authors have approved this manuscript.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.sleh.2024.06.003.

References


