0256

CHILD MALTREATMENT AND MULTIDIMENSIONAL SLEEP HEALTH AMONG INCOMING FIRST-YEAR COLLEGE STUDENTS

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Introduction: Despite the growing body of evidence linking child maltreatment to compromised sleep health in adulthood, links in emerging adults are understudied. We examined associations between child maltreatment (CM) and multidimensional sleep health among emerging adults undergoing the major life transition of starting college.

Methods: First-year college students (N=682, 41% male, 48% Non-Hispanic White, 22% Non-Hispanic Asian, 15% Hispanic all races, 6% Non-Hispanic Black, and 9% Non-Hispanic other races) completed daily sleep diaries (DSDs) for 9 weeks, and completed the Childhood Trauma Questionnaire (CTQ), Epworth Sleepiness Scale (ESS), and Pittsburgh Sleep Quality Index (PSQI) following DSD completion. We used linear regression models to examine associations between CTQ-derived CM (0=none, 1=any [moderate to severe emotional abuse/neglect, physical abuse/neglect, or sexual abuse]) and sleep health (Buysse, 2014) using a multidimensional score encompassing components from the RUSATED model (regularity [DSD sleep midpoint SD: 0= >1 hour, 1= ≤1 hour], satisfaction [PSQI sleep quality item: 0=fairly or very bad, 1=very or fairly good], alertness [ESS score: 0= >10, 1= ≤10], timing [DSD sleep midpoint: 0= <3:30 or >5:30, 1= ≥3:30 and ≤5:30], efficiency [DSD sleep efficiency: 0= <93%, 1= ≥93%], and duration [DSD sleep duration: 0= <7 hours or >10 hours, 1= ≥7 hours and ≤10 hours].

Results: In the full sample 20.5% reported CM (within-group prevalences: females 21%, males 20%, Non-Hispanic Whites 12%, Non-Hispanic Asians 28%, Hispanics of all races 26%, Non-Hispanic Blacks 34%, and Non-Hispanics of other races 30%). Those with CM had significantly worse sleep health (B=-0.25, 95% CI=-0.46, -0.04) compared to those without CM, but not after adjustment for sex and race/ethnicity. In logistic regression models, the only individual sleep health component significantly associated with CM was sleep satisfaction. After adjustment for sex, race/ethnicity, and depressive symptoms, those who experienced CM had a 52% lower odds of reporting good sleep quality (OR=0.48, 95% CI=0.30, 0.76).

Conclusion: CM is associated with worse sleep satisfaction among first-year college students, which aligns with previous research in older adults. Additional research should examine neurophysiological correlates of sleep satisfaction in the context of child maltreatment and effects on subsequent health.

Support (If Any): P206M139743, MH079179, T32HD101392.

0257

TESTING THE DIRECTIONALITY OF SLEEP AND STRESS DURING THE PERINATAL PERIOD: WHAT'S THE IMPACT ON PERINATAL DEPRESSION?

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Introduction: Pregnancy is a time of pronounced sleep disturbance, with a majority (~85%) of women endorsing shorter, more fragmented sleep as gestation progresses. While new-onset antenatal depression (AND) is a known risk factor for postpartum depression, its etiology remains less understood, despite well-established evidence that incidence is the same among healthy first-time mothers as compared to women with established riskfactors inclusive of family or personal history of psychopathology. Heightened daily stress appraisals may be one critical pathway through which disrupted sleep gives rise to AND. The current study tested the directionality of the relationship between habitual nighttime sleep parameters and daytime stress ratings using a prospective amulatory field study design.

Methods: Fifty primiparous women (38% White; 32% Black; 30% Other race/ethnicity; mean age = 32 years, 28 weeks gestation) without a history of sleep disorders nor psychopathology completed 10-days (9-nights) of actigraphy and sleep diaries. They also engaged in 3-days of superimposed ecological momentary assessments (EMA) rating stress, positive, and negative affect at four intervals throughout the day. Analyses examined negative affective responses to social conflict and task-based demand througout days of EMA, at the within-person and between-women levels. Sleep variables explored included total sleep time (TST), sleep efficiency (SE; log-transformed), sleep onset latency (SOL) and sleep quality as measured by the Pittsburgh Sleep Quality Index. Cross-lagged hierarchical mixed models tested directionality of sleep-stress relationship. Time-varying covariates included time-of-day, previous day stress for sleep outcomes, and previous night sleep for stress outcomes, at the within-person levels.

Results: After days of greater stress (demand and conflict), women experienced significantly shorter, less efficient sleep and took longer to fall asleep (by both diary and actigraphy; [Beta(SE)=-6.3(1.4); 1.2(.12,), R^2=.27, .32, respectively; ps<.01]. Following nights of shorter sleep, women endorsed greater negative affective responses to stress (Beta=.12, SE=.01, p<.001; R^2=.27). Over the assessment period, women who had shorter, less efficient sleep experienced greater frequency, higher severity stressors, after adjusting for time-of-day, and baseline sleep characteristics, depression and anxiety levels (Betas = -7.4(2.6); .14(.01), ps<.001, respectively). Given this bidirectional support, stress was examined as a moderator of the relationship between TST and depression severity at 34-36 weeks gestation, indicating that greater stress explained the relationship between shorter TST and heightened AND after adjustment for baseline measures.

Conclusion: This is the first study to explore directionality of sleep-stress relationships in a perinatal sample; results provide support for the idea that heightened daily stress engenders greater sleep disturbance (difficulty initiating and maintaining sleep; shorter duration). Bidirectional support for shorter sleep duration and increased stress appraisal was also found. The current project provides preliminary evidence for stress "spill-over" effects (i.e., stress transmission) as a potential mechanism for heightened antenatal depression symptoms.

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