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# MOTHER'S PARENTING STYLE AS A MODERATOR IN THE RELATIONSHIP BETWEEN TEMPERAMENT AND SLEEP PROBLEMS IN CHILDREN WITH OBESITY

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**Introduction:** Based on past studies, a child's temperament and parenting style greatly affect a child's sleep. However, there are limited studies that have investigated how parenting styles and a child's temperament interact and affect the child's sleep in obese children. Thus, this study investigated parenting styles as a moderator in the relationship between temperament and sleep in obese children.

**Methods:** Seventy-seven obese children (male=66.2%, average BMI =  $27.35\pm2.78$ ) participated in the study. The mean age of the participants was  $10.82(\pm 1.00)$  years. The primary caregiver (mother) of the participants completed the Junior Temperament and Character Inventory (J-TCI), and Parents as Social Context Questionnaire (K-PSCQ), and Children's Sleep Habits Questionnaire (CSHQ). Among the different subscales, only Novelty Seeking (NS) and Reward Dependence (RD) were used for analysis among Junior Temperament and Character Inventory (J-TCI) components.

**Results:** In this sample, 66 children (85.7%) reported significant levels of sleep problems based on the CSHQ. Novelty seeking (NS) and reward dependence (RD) significantly predicted sleep problems (B=-.771, p<.05, B=-.683, p<.01). Additionally, mother's negative parenting style moderated the relationship between NS and the child's sleep problem [B=.03, 95% CI=.007, .049] and the relationship between RD and the child's sleep problem [B=.031, 95% CI=.013, .049]. The more negative mother's parenting style, the higher the child's NS or RD scores had a negative effect on sleep.

**Conclusion:** The results of this study show that obese children experience high levels of sleep disturbance. Additionally, the mother's negative parenting style moderated the relationship between temperament and sleep problems in obese children. The results suggest that sleep interventions for obese children should include the mother, especially in children with high novelty seeking and reward dependence.

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#### PERSISTENCE, REMISSION, ACQUISITION OF SLEEP DISTURBANCES CONTRIBUTES TO THE TRANSITION OF EMOTIONAL/BEHAVIORAL PROBLEMS IN PRESCHOOL CHILDREN

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**Introduction:** Cross-sectional and longitudinal studies have consistently reported associations between sleep disturbances and emotional/behavioral problems in children. However, few studies have examined whether the remission, acquisition of sleep disturbances contribute to the transition of emotional and behavioral problems during preschool years.

**Methods:** This study used data from the Shanghai Children's Health, Education and Lifestyle Evaluation-Preschool (SCHEDULEA-P), a prospective, population-based cohort study of newly enrolled preschoolers in Shanghai kindergartens in Nov. 2016. In total, 17182 children with complete data on parent-reported Strength and Difficulties Questionnaire (SDQ) both at school enrollment(wave 1) and the third year(wave 2) were included in the study. Children's sleep disturbances were measured using Children Sleep Habit Questionnaire (CSHQ) at both waves.

Results: The 17182 participants included 8935(52.0%) males, with a mean (SD) age of 3.73(0.29) years at wave 1. 66.9%, 7.2%, 17.4% and 8.5% of these children were divided into persistent sleep disturbance, acquired, remitted group and persistent normal sleep group, respectively. The proportion of persistent, acquired, remitted emotional/behavioral problems and normal group was 13.7%, 9.4%, 21.1%, 55.8%. SDQ scores of acquired sleep disturbances group stayed high at wave 3, while SDQ scores of remitted sleep disturbances group decreased sharply during the preschool years. After adjusted for confounding factors, the odds of remission from emotional/behavioral problems among children who experienced remission of sleep disturbances, who had persistent normal sleep were both much higher compared to those who had persistent sleep disturbances (OR=2.53(2.12-3.01), p<0.001; OR=2.74(2.01-3.75), p<0.001). Meanwhile, the odds of acquisition of emotional/behavioral problems at wave 2 among subjects who newly acquired sleep disturbances at wave 2 and who had persistent sleep disturbances was similarly higher than those who never have sleep disturbances(OR= 2.75, P<0.001 VS OR=2.77, P<0.001). Besides, those who experience remission of sleep disturbances still have 1.48 times the odds of acquisition of emotional / behavioral problems(P=0.006).

**Conclusion:** The remission of sleep disturbances contributed to the remission of emotional/behavioral problems, while the emergence of sleep disturbances throughout preschool years increased the risk of the acquisition of emotional/behavioral problems.

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### MATERNAL DEPRESSION AND INFANT SLEEP DURATION TRAJECTORY IN THE FIRST 3 YEARS: A PROSPECTIVE COHORT STUDY.

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