

Intra-familial longitudinal associations of sleep characteristic between 3- and 60-months postpartum in the SEPAGES cohort

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Background: Intrafamilial sleep may be interrelated especially in postpartum. We aimed at identifying longitudinal interrelations between child, maternal and paternal sleep duration and quality between 3 and 36 months postpartum.

Methods: We used data from the SEPAGES cohort (470 children and their parents) in the Grenoble area, France. We previously identified three maternal (M1-M3) and three paternal (P1-P3) sleep multi-trajectories (SMT) in 180 couples who reported sleep information between 3 and 36 months postpartum: shorter nighttime sleep duration (NSD) and high prevalence of subjective sleep loss (SSL) (M1, P2); long NSD but medium prevalence of SSL (M2, P3); and long NSD and low prevalence of SSL (M3, P1). For children, sleep information (total sleep duration (TSD), night waking (NW), sleep onset difficulties (SOD) and SSL) was collected by questionnaires at 3, 12, 36 and 60 months postpartum. Group-based multi-trajectory modelling was used to identify SMT among the 180 children of the previous couples. Multinomial logistic regressions adjusted for confounders assessed associations between children and maternal and paternal SMTs.

Results: We identified three SMTs for children between 3- and 60-months postpartum. Group C1 (29.4%) had a long TSD (between 14h02 and 11h20), a rapid decrease in NW from 47.3% to 0% and a low SOD and SSL prevalence (<20%). Group C2 (60.0%) had a long TSD (between 14h24 and 11h07), a decrease in NW (from 61.1% to 11.1%) and a medium SOD and SSL prevalence (<30%). Group C3 (10.6%) had the shortest TSD (between 13h24 and 10h08) and the highest prevalence of sleep problems (>25%). In adjusted models, children in group C2 (long TSD) were less likely to have a mother in group M1 (high sleep disturbances) whereas children in group C3 (high sleep disturbances) were more likely to have such a mother, compared to children in group C1. No association was identified with paternal sleep.

Conclusions: Between 3 and 60 months postpartum, the mother's sleep characteristics were more consistent with the child's sleep characteristics than the fathers' suggesting either greater maternal sensitivity to child sleep disturbances or greater maternal involvement in child sleep.