Sleep Problem Trajectories and Cumulative Socio-ecological Risks: Birth to School-age

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OBJECTIVES: To evaluate whether there are distinct childhood sleep problem trajectories from birth to 10-11 years and to assess associations with cumulative socio-ecological risks (child, family, context). STUDY DESIGN: Participants were 5107 children from the Longitudinal Study of Australian Children—Birth Cohort. At birth, cumulative risk indexes were generated for birth, parenting, family, socioeconomic, and neighborhood risks. Parent-reported child sleep problems were assessed biennially from ages 0-1 to 10-11 years. Sleep problem trajectories were derived using latent class analysis. Multivariable logistic regression was used to examine associations with risk indexes. RESULTS: Five distinct trajectories emerged: persistent sleep problems through middle childhood (7.7%), limited infant/preschool sleep problems (9.0%), increased middle childhood sleep problems (17.0%), mild sleep problems over time (14.4%), and no sleep problems (51.9%). Cumulative mother- and father-reported family risks (distress; marital/relational hostility) were linked to nearly all of the trajectories, whereas father- and mother-reported parenting risks were associated with fewer trajectories. Birth risks were associated with increased middle childhood sleep problems. Neighborhood risks were not associated with any trajectories. Socioeconomic risks were linked to mild and persistent sleep problem trajectories. Cumulative risk indexes were most associated with increased middle childhood sleep problems. CONCLUSIONS: This study identified distinct longitudinal sleep problem trajectories, suggesting the need for continuous sleep screening over development. Cumulative risks assessed at birth—primarily maternal and paternal family risks—predicted these trajectories, especially for the sleep problems in middle childhood trajectory. Preventive interventions targeting modifiable factors, particularly caregiver distress and marital/relational hostility, could benefit child sleep.

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Authors: Ariel A. Williamson

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