Children's Hospital of Philadelphia PolicyLab

Neighborhood Environments and Sleep Among Children and Adolescents: A Systematic Review

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Understanding salient environmental determinants of pediatric sleep is essential for informing interventions and public health initiatives. Emerging evidence suggests that the neighborhood environment can impact pediatric sleep, but this evidence has not yet been systematically reviewed. We conducted a systematic review of the scientific literature on associations between neighborhood environments and sleep in young children (0-5 y), school-aged children (6-12 y) and adolescents (13-18 y). We reviewed 85 articles published between 2003 and 2020. The most commonly examined neighborhood exposure was low socioeconomic status (40 studies), which was associated with sleep outcomes in 58% of studies (primarily shorter sleep duration, later sleep timing, or obstructive sleep apnea). Evidence was stronger for neighborhood safety/crime/violence (21 studies), with 86% of studies reporting associations with sleep outcomes (primarily self- or caregiver-reported sleep problems). Fewer studies examined associations of neighborhood physical environment exposures, including noise (15 studies), the built environment (seven studies), and air pollution (six studies). Limitations of the current body of evidence include 1) limited examination of neighborhood exposures other than socioeconomic status or safety, 2) use of primarily cross-sectional observational study designs, 3) lack of objective sleep outcome assessment, and 4) limits of current exposure assessment methods.

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