

Beds for Kids: Enhancing Pediatric Sleep Among Low-income Youth

Statement of Problem

Sleep is one of the most fundamental aspects of child development. Insufficient sleep duration and poor sleep quality impact [one-third of preschoolers](#) and [more than half of school-aged children](#). These sleep deficiencies are associated with [a number of adverse developmental outcomes](#), including diminished neurocognitive, behavioral and physical health functioning, and increased family stress. Studies show that there are [persistent sleep health disparities](#) across the lifespan. For instance, compared to children living in higher socioeconomic status (SES) homes or neighborhoods, those living in lower-SES contexts may be exposed to [increased environmental sleep disruptions](#), such as noise, light and household overcrowding. Additionally, living without an individual bed or other designated sleep space can make it challenging for youth to obtain healthy sleep.

Over the last 5 years, we have partnered with the [Beds for Kids Program](#) to conduct several studies evaluating the benefits of child bed provision and family sleep education on pediatric sleep health. Beds for Kids is a Philadelphia-area program that is part of the larger volunteer organization, One House at a Time, that provides beds, bedding, and a sleep education brochure to children living without an individual bed (e.g., sleeping on the floor, on a sofa, or crowded into one bed with family members) and in a household whose income is at or below 100 percent of the United States poverty threshold. The program accepts referrals from area social service agencies, as well as from Children's Hospital of Philadelphia (CHOP) primary care sites in the greater Philadelphia area.

Description

[Our initial study](#) with Beds for Kids evaluated whether receiving a bed plus caregiver-based sleep education (3 messages: an early bedtime; no caffeine; no bedroom electronics) was associated with improvements in child sleep health. We found that in 152 children ages 2 to 12 years, those who received a bed plus sleep health education showed increased caregiver-reported nighttime sleep duration and reduced electronics in their bedrooms compared to children who received a bed plus a control educational condition (dental hygiene). With funding from CHOP, we then examined the impact of Beds for Kids' participation on the sleep and mood of preschoolers and their primary caregivers and are now analyzing study results.

The goal of our current study, funded by the American Academy of Sleep Medicine Foundation, is to determine whether bed provision combined with community provider-delivered sleep health education through Beds for Kids can improve sleep in school-aged children referred to the Beds for Kids program. For this study, we are recruiting up to 100 caregiver-child pairs with a child aged 8-12 years. Half of the families receive standard care from the Beds for Kids program (bed, bedding, sleep education handout), and half of families will receive the Enhanced Beds for Kids program (bed, bedding, sleep education handout + personalized sleep health education sessions). Beds for Kids staff are delivering the personalized sleep health education through two telephone sessions. To assess child sleep outcomes, caregivers and children are completing ratings of child sleep duration and quality at baseline, 2-weeks post intervention, and 6-week follow-up. While a primary aim of this study is to identify whether additional, personalized sleep health education can enhance child sleep

outcomes, we are also evaluating whether the personalized sleep health education is feasible to implement and acceptable to Beds for Kids staff and families. This research has the potential to make a significant, positive impact on pediatric sleep health disparities, and to inform the large-scale dissemination of community provider-implemented sleep health education.

Next Steps

By analyzing the impact of Beds for Kids and its sleep education components, we hope to offer deeper insight into how the presence of a bed and family sleep education can impact nightly child sleep, daily child behavior and caregiver mood, opening the door for future outreach programs.

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PolicyLab Leads

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Faculty Scholar

Ariel Williamson is a PolicyLab faculty scholar and assistant professor of psychiatry and pediatrics at the Perelman School of Medicine of the University of Pennsylvania. Dr. Williamson is also an appointed faculty member at Clinical Futures, the Sleep Center in the Division of Pulmonary and Sleep Medicine, and in the Department of Child and Adolescent Psychiatry and Behavioral Sciences at Children's Hospital of Philadelphia (CHOP). She is a licensed psychologist and diplomat in behavioral sleep medicine and currently provides clinical services to youth with medical and behavioral sleep problems seen in the CHOP Sleep Center. Dr. Williamson serves as a sleep expert on the [Pediatric Sleep Council](#), an international team with expertise in sleep and development in young children. She is additionally a member of the Board of Directors for the Philadelphia-area [Beds for Kids program](#), which provides beds, bedding and healthy sleep education to children living without an individual bed and in impoverished homes. Dr. Williamson was nominated and accepted to the Society for Pediatric Research in 2020. She is also currently an Associate Editor for *Sleep Health*, the official journal of the National Sleep Foundation.

Dr. Williamson's research leverages pediatric sleep as a modifiable factor that can promote positive development and prevent child physical and behavioral health problems. Specifically, her research focuses on understanding socio-ecological determinants of pediatric sleep health disparities and behavioral

approaches to promote pediatric sleep health and treat sleep problems in primary care and in partnership with community organizations. She also collaborates with the Healthy Minds, Healthy Kids program at CHOP on research related to integrated primary care service delivery, treatment engagement and patient outcomes.

Dr. Williamson earned her doctorate in clinical psychology from the University of Delaware. She completed her predoctoral internship in integrated behavioral health at CHOP, and a T32 postdoctoral fellowship in behavioral sleep medicine at the CHOP Sleep Center and the Center for Sleep and Circadian Neurobiology at the University of Pennsylvania Perelman School of Medicine. She is a two-time NIH loan repayment award recipient and was awarded a Sleep Research Society Foundation Career Development Award in 2018. Dr. Williamson's research is currently funded by the National Institute of Child Health and Human Development, the National Heart, Lung and Blood Institute, and by an American Academy of Sleep Medicine Foundation Community Sleep Health Award.



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Related Tools & Publications

- [Sleep Well!: A Pilot Study of an Education Campaign to Improve Sleep of Socioeconomically Disadvantaged Children.](#)

[Article](#)

Dec 2016

- [Cumulative Socio-demographic Risk Factors and Sleep Outcomes in Early Childhood](#)

[Article](#)

Sep 2019

- [Early Childhood Sleep Intervention in Urban Primary Care: Caregiver and Clinician Perspectives](#)

[Article](#)

May 2020

- [Identifying Modifiable Factors Linking Parenting and Sleep in Racial/Ethnic Minority Children](#)

[Article](#)

May 2020

- [Socioeconomic Disadvantage and Sleep in Early Childhood: Real-world Data from a Mobile Health Application](#)

[Article](#)

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