

Sleep health and yoga intervention delivered in low-income communities improves sleep

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Pilot study results indicate that a sleep and yoga intervention has promising effects on improving sleep disturbance, sleep-related impairment, and sleep health behaviors.

Sleep problems are very common in low income communities yet often under-recognized and untreated, and are often related to sleep [health behaviors](#), stress, and adverse environmental conditions. This study researched how to effectively deliver sleep [health](#) education and yoga interventions in underrepresented communities.

"We were encouraged to see large improvements in self-reported sleep quality and daytime functioning after the sleep hygiene and yoga intervention despite the short intervention period in this pilot study" said Christine Spadola, Ph.D., a postdoctoral fellow at both Harvard Medical School and Brigham and Women's Hospital in Boston, Massachusetts.

"We found that many of our participants were not initially aware of some of the fundamental behaviors that comprise sleep hygiene, or healthy sleep practices, but were pleased to see their openness to making changes to improve sleep and their enthusiasm for participating in yoga."

By partnering at all levels with community members, the research team was able to develop a sleep health and yoga intervention that offered content relevant to the participants and was convenient for participants to attend. Group sessions were held in community rooms within two large low-income housing units in Boston, providing easy access for residents.

"Some participants reported that they were able to deeply relax for the first time as a result of the yoga classes," said Spadola. "Considering that stress underlies [poor sleep](#) as well as many chronic health conditions, we were very pleased with this result."

A pilot study was conducted of a combined sleep health and yoga intervention among racially/ethnically diverse adults residing in low-income housing communities, who reported sleeping less than 6 hours a night (n=23). The six-week intervention consisted sequentially of: one group sleep health education session delivered by a sleep expert (1-hour), one telephone coaching session (15 minutes), and four weekly 1-hour yoga classes.

Participants completed assessments both before and after the intervention, which included standardized measurements of sleep and well-being, such as the PROMIS Sleep-Related Impairment and Sleep Disturbance Short Forms, Sleep Hygiene Index, and validated stress and mood assessments.

Mean participant age was 41.4 years; 80.7 percent were female; 61.5 percent identified as non-Hispanic Black and less than 20 percent had a college degree. Results showed significant pre/post intervention improvements in sleep duration (5.3 ± 0.9 hours/night versus 7.2 ± 1.7 hours/night [$p=.02$]), sleep-related impairment ($p=.002$), sleep disturbance ($p=.002$), and sleep health behaviors ($p=.021$).

Attendance (100 percent received sleep health education; 47.8 percent attended at least 2 of 4 yoga classes), intervention feedback scores (73.7 percent rated the sleep education session as helpful or very helpful; 63.2 percent strongly agreed that the yoga class left them feeling relaxed and less stressed), and qualitative data support the acceptability of the intervention.

According to the study authors, this sleep intervention can be brought directly to residential communities of under-served populations and holds promise for high uptake and sustainability.

"Our work suggests that a community informed [intervention](#) that addresses socio-contextual barriers to participation and adherence and partners with residential community leaders and institutions can significantly impact health behaviors, such as improved sleep," said Spadola.

The senior authors of the study, Drs. Suzanne Bertisch and Susan Redline, are currently conducting a larger randomized controlled study to test the added value of [yoga](#) over sleep hygiene alone.

More information: Abstract Title: A Community-Based Sleep Health and Yoga Intervention to Improve Sleep Outcomes among Low-income and Racial/Ethnic Minority Adults

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