

NORC News

Fobian receives funding to study effects of sleep and media on adolescent's weight and diabetes risk

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[Aaron Davis Fobian, PhD](#) [1], assistant professor in the [Department of Psychiatry](#) [2] and the [Nutrition Obesity Research Center \(NORC\)](#) [3], is the recipient of a [National Institutes of Health \(NIH\)](#) [4] K award funded by the [National Diabetes and Digestive and Kidney Disease Advisory Council](#) [5] to conduct the study “A Sleep and Media Intervention to Improve Adolescents’ Weight and Risk of Type 2 Diabetes.”

The proposed randomized controlled trial seeks to evaluate the effects of a sleep and media (such as television, Internet, and cell phone) use intervention on sleep duration and quality, insulin sensitivity, appetite-regulating hormones, and body composition in 15- to 17-year-old obese adolescents who do not get adequate sleep. Study subjects will take part in four sessions after being randomized in to one of two groups: 1) sleep intervention group (in which participants will receive cognitive behavioral training with a goal to improving their extent of sleep, be educated on media use’s influence on sleep, and learn problem-solving techniques for increasing sleep duration and decreasing nighttime media use); and 2) control group (in which participants will receive study skills training).

Dr. Fobian and colleagues hypothesize that at the end of the trial and at three-month follow-up the sleep intervention group will show not only increased duration and quality of sleep as well as higher insulin sensitivity, but also decreased levels of ghrelin and percentage of body fat as well as reduced use of nighttime media, in comparison with the control group. Results of this preliminary study will provide the foundation for further testing of the link between sleep and instances of obesity and type 2 diabetes in adolescents.

“Although the association between sleep and obesity and type 2 diabetes has long been recognized, questions remain about both the causal pathway linking short or disrupted sleep with these conditions and the effectiveness of incorporating sleep into obesity interventions. We are excited about this study because it is the first to examine the effects of a longer-term sleep intervention aimed at increasing sleep duration on factors related to obesity and type 2 diabetes,” says Dr. Fobian.

Her mentoring team on the K award consists of [Barbara Gower, PhD](#) [6], professor in the [Department of Nutrition Sciences](#) [7] (primary mentor); [David B. Allison, PhD](#) [8], distinguished professor and

director of the NORC; and [Karen Gamble; PhD](#) [9], associate professor in the Department of Psychiatry.

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