



## Social Support and Sleep Symptoms in US Adults

Clarence Glenn III; Ngozi Enwerem, MD; Yewande Odeyemi, MD; Alem Mehari, MD; Richard F. Gillum, MD

*Department of Medicine, College of Medicine, Howard University, Washington, DC*

Levenson et al. present valuable information on co-occurrence of a common sleep disorder and behavioral health problem focusing on cognitions.<sup>1</sup> Some have suggested the adverse effect of social isolation, another common problem, on health may be in part mediated by sleep disturbances.<sup>2</sup> We postulated that sleep disorders co-occur more frequently with social isolation, than would be expected by chance. Only a few previous studies examined this association with variable results. We tested this hypothesis in 2,852 adults aged 40 y and over with complete data on sleep duration, emotional support, and body mass index from the 2005–2006 National Health and Nutrition Examination Survey (NHANES). Interviewers asked participants a series of questions regarding sleep in the past year as reported elsewhere.<sup>3</sup> Short sleep was defined as self-reported usual sleep duration  $\leq 6$  hours. Symptoms of sleep disordered breathing (SDB) were snorts, gasps, or stops in breathing while asleep  $\geq 1$  time per week. We selected five kinds of social support: emotional support (yes/no), financial support (yes/no), number of close friends ( $\geq 5$ / $< 5$ ), frequency of attendance at worship/church services ( $\geq$  weekly/ $<$  weekly), and marital status (married/other) to compute a social support score (SSS, range 0–5). Because Cronbach  $\alpha$  for this score was only 0.36, a second score was created by substituting getting most support from a spouse for marital status and not living alone for attendance at religious services, raising  $\alpha$  to 0.50. Weighted analyses took complex survey design into account.

In descriptive analyses, 25% of participants reported low SSS ( $< 3$ ), 18% reported medium low (SSS = 3), 28% reported medium high (SSS = 4), and 29% reported high SSS (SSS = 5). SDB symptoms were reported by 30%. Short sleep duration occurred in 36%.

SSS seemed associated with SDB symptoms in bivariate analysis ( $p = 0.05$ ). Further, short sleep duration was less common (31%) in those with high levels (SSS = 5) than in those with lower levels of social support (SSS = 4, 38%, SSS = 3, 43%, SSS  $< 3$ , 37%,  $p = 0.0009$ ).

To confirm these findings, we performed logistic regression. Low social support (SSI  $< 4$ ) was not significantly associated

with SDB symptoms after adjusting for age, gender, race/ethnicity, marital status, educational level, smoking, alcohol consumption (any, none), caffeine intake (any, none), and BMI ( $< 20$ , 25–30,  $> 30$ ). However low social support was independently associated with a 30% increase in odds of short sleep duration ( $p = 0.05$ ). Age, black race, Hispanic ethnicity, smoking, and obesity were associated with SDB symptoms and short sleep at significant or near-significant levels. Results were similar using the alternate social support scale. To shed light on this association, these findings like those of Levenson et al. need to be confirmed in longitudinal studies of psychosocial factors including social support, sleep disorders, and other health outcomes.

### CITATION

Glenn C, Enwerem N, Odeyemi Y, Mehari A, Gillum RF. Social support and sleep symptoms in US adults. *J Clin Sleep Med* 2015;11(8):957.

### REFERENCES

1. Levenson JC, Benca RM, Rumble ME. Sleep related cognitions in individuals with symptoms of insomnia and depression. *J Clin Sleep Med* 2015;11:847–53.
2. Hawkey LC, Cacioppo JT. Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Ann Behav Med Publ Soc Behav Med* 2010;40:218–27.
3. Mehari A, Weir NA, Gillum RF. Gender and the association of smoking with sleep quantity and quality in American adults. *Womens Health* 2014;54:1–14.

### SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication May, 2015

Submitted in final revised form May, 2015

Accepted for publication May, 2015

Address correspondence to: Richard F. Gillum, MD, College of Medicine, Howard University Hospital, 2041 Georgia Avenue, NW, Washington, DC 20060; Email: [rfg2.howard.edu@gmail.com](mailto:rfg2.howard.edu@gmail.com)

### DISCLOSURE STATEMENT

The authors have indicated no financial conflicts of interest.