https://doi.org/10.5664/jcsm.9590

JCSM | Journal of Clinical Sleep Medicine

LETTERS TO THE EDITOR

# Concern about sleep disorders in underresourced settings is imminent

Lijuan Zeng, MS[1,*]; Riken Chen, MD[2,*]; Linna Hu, MD[3,*]; Donghao Wang, MS[2,*]; Minshan Chen, MS[2]; Yuanqiang Lai, MS[2]; Jiangpeng Lin, MS[2]; Junyan Lin, MS[2]; Nanhong Li, MD[4]; Yu Zeng, MD[1]; Zhenzhen Zheng, MD[1]

*[1]Department of Respiratory and Critical Care Medicine, The Second Affiliated Hospital of Guangdong Medical University, Zhanjiang, Guangdong, China; [2]State Key Laboratory of Respiratory Disease, The First Affiliated Hospital of Guangzhou Medical University, Guangzhou Institute of Respiratory Disease, National Clinical Research Center for Respiratory Disease, Guangzhou, Guangdong, China; [3]Department of Respiratory and Critical Care Medicine, Guangzhou University of Chinese Medicine, Guangzhou, China; [4]Department of Nephrology, The Affiliated Hospital of Guangdong Medical University, Zhanjiang, Guangdong, China; *Contributed equally*

With great interest we read the recent article by Roche et al[1] published in a recent issue of the *Journal of Clinical Sleep Medicine,* and we congratulate the authors on their effort to further shed light into the relationship between obstructive sleep apnea (OSA) and increased cardiometabolic risk. This is an important field, and the connection of both has been incompletely investigated so far.[2] Interestingly, Roche et al[1] found that in the aging South African community with obesity and hypertension, OSA prevalence is alarming and associated with cardiometabolic risk. The results highlight the necessity for actively promoting health education and systematic screening and treatment of OSA in this population to prevent future cardiovascular morbidity, especially among women.

Epidemiological studies have shown that the prevalence of OSA can reach 32.9%, which means that many patients with OSA are still undiagnosed.[3] If untreated, OSA can cause serious health consequences, which in turn lead to an increase in mortality.[4,5] As of the end of 2019, the rural proportion of China's permanent population was as high as 40%.[6] According to China's census in 2021, of the total population of 1.41 billion, there are about 560 million rural people. According to data released by the World Bank, the global rural population was approximately 4.5261 billion in 2017, which is about 60% of the total global population of 7.53 billion. This is a huge population, many of whom have not yet been diagnosed. Roche et al[1] found that 29.3% had undiagnosed OSA, but this is only the prevalence rate based on apnea-hypopnea index ≥ 15 events/h as the diagnostic criterion. If apnea-hypopnea index ≥ 5 events/h is used as the diagnostic criterion,[7] the prevalence rate is as high as 64.0%. The sleep problems of this group of people are worthy of attention. Of course, this high prevalence may be related to the fact that the proportion of hypertension and obesity in the study is larger. Another important point is that this part of the population is mainly older adults. The third point is that the sample size of the study is small. We think that OSA can be screened by portable equipment, and if there are abnormalities, the diagnosis can be confirmed by polysomnography. This can expand the sample size and make the results more reliable. Regardless of these factors, the rural population is inherently older and lacks medical resources. This is a special population. They usually have less medical knowledge and cannot get early diagnosis. Once the problem occurs, it has basically reached the stage of serious disease, and it will become more obvious as the aging process worsens.[8,9] The health problems of this part of the rural population deserve greater attention. This is a relatively large medical burden, and early diagnosis and treatment will greatly improve the prognosis.

Although the study has some limitations, this article focuses on the OSA and cardiometabolic risk of the rural population, which is a very meaningful question. In the future, the government needs to pay more attention and support to them, and medical institutions need to strengthen cooperative research among these rural populations, building the case for the treatment of sleep disorders in underresourced settings.

## CITATION

Zeng L, Chen R, Hu L, et al. Concern about sleep disorders in underresourced settings is imminent. *J Clin Sleep Med*. 2021; 17(11):2339–2340.

## REFERENCES

1. Roche J, Rae DE, Redman KN, et al. Impact of obstructive sleep apnea on cardiometabolic health in a random sample of older adults in rural South Africa: building the case for the treatment of sleep disorders in underresourced settings. *J Clin Sleep Med.* 2021;17(7):1423–1434.
2. McEvoy RD, Antic NA, Heeley E, et al. SAVE Investigators and Coordinators. CPAP for prevention of cardiovascular events in obstructive sleep apnea. *N Engl J Med.* 2016; 375(10):919–931.
3. Chen L, Pivetta B, Nagappa M, et al. Validation of the STOP-Bang questionnaire for screening of obstructive sleep apnea in the general population and commercial drivers: a systematic review and meta-analysis. [published online ahead of print, 2021 Jan 28]. *Sleep Breath.*

4. Duarte RL, Magalhães-da-Silveira FJ, Oliveira-E-Sá TS, Silva JA, Mello FC, Gozal D. Obstructive sleep apnea screening with a 4-item instrument, named GOAL questionnaire: development, validation and comparative study with No-Apnea, STOP-Bang, and NoSAS. *Nat Sci Sleep.* 2020;12:57–67.
5. Lichstein KL, Justin Thomas S, Woosley JA, Geyer JD. Co-occurring insomnia and obstructive sleep apnea. *Sleep Med.* 2013;14(9):824–829.
6. Institute of Rural Development, Chinese Academy of Social Sciences. *China Rural Development Report 2020.* Beijing, China: China Social Sciences Press; 2020.
7. Kapur VK, Auckley DH, Chowdhuri S, et al. Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: an American Academy of Sleep Medicine clinical practice guideline. *J Clin Sleep Med.* 2017;13(3):479–504.
8. Micheletti SJ, Bryc K, Ancona Esselmann SG, et al. 23andMe Research Team. Genetic consequences of the transatlantic slave trade in the Americas. *Am J Hum Genet.* 2020; 107(2):265–277.
9. Mayosi BM, Flisher AJ, Lalloo UG, Sitas F, Tollman SM, Bradshaw D. The burden of non-communicable diseases in South Africa. *Lancet.* 2009;374(9693): 934–947.

## SUBMISSION & CORRESPONDENCE INFORMATION

**Submitted for publication July 17, 2021**
**Submitted in final revised form July 25, 2021**
**Accepted for publication July 26, 2021**
Address correspondence to: Zhenzhen Zheng, MD, Department of Respiratory and Critical Care Medicine, The Second Affiliated Hospital of Guangdong Medical University, 12 Minyou Road, Zhanjiang, Guangdong, 524000, China; Email: 3342227603@qq.com and Yu Zeng, MD, Department of Respiratory and Critical Care Medicine, The Second Affiliated Hospital of Guangdong Medical University, 12 Minyou Road, Zhanjiang, Guangdong, 524000, China; Email: 775758583@qq.com

## DISCLOSURE STATEMENT

All authors have seen and approved this manuscript. The authors report no conflicts of interest.