




# Considering the Role of Psychological Stress on Sleep Quality in Individuals with Subclinical Hypothyroidism [Letter]

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Inayat Hussain Khan   
Tasnim Chowdhury   
Samiul Oliver Khan 

Faculty of Medicine, St George's Hospital  
Medical School, London, UK

## Dear editor

We read the article by Song et al with great interest<sup>1</sup> and thank the authors for exploring the relationship between subclinical hypothyroidism and sleep quality in a large general population. Subclinical hypothyroidism is a challenge to both patients and healthcare systems; potential sequelae include progression to hypothyroidism and cardiovascular disease.<sup>2</sup> There are few studies exploring the relationship between subclinical hypothyroidism and sleep quality despite its extensive impact on health, as discussed in the current study.<sup>1</sup>

The authors took great care in recruiting individuals from the Health Promotion Center of West China Hospital. Individuals with previous thyroid disease, other medical conditions and those who were pregnant were excluded to ensure the effects of subclinical hypothyroidism could initially be evaluated in a general population. Potential confounding variables such as diabetes, alcohol consumption and smoking were adjusted for when assessing sleep quality.

Despite this, the authors did not consider psychological stress in participants. Stress is common amongst the general population and should not be overlooked due to its negative effects on sleep as discussed previously.<sup>3</sup> Similarly, the effects of psychological stress on the Hypothalamic-Pituitary-Thyroid axis have also been documented.<sup>4</sup>

One could argue that some of the questions in the Pittsburgh Sleep Quality Index used in the current study could acknowledge some manifestations of stress. However, we recommend that a more formal clinical tool, such as the Perceived Stress Scale should be utilized.<sup>5</sup> This would allow for a quantifiable measure of stress in participants, which could subsequently be adjusted for in regression models.

Future studies evaluating subclinical hypothyroidism and sleep quality should consider participants' stress levels. Although psychological stress is not a formal mental or physical health diagnosis, it should be measured using an appropriate tool when evaluating sleep quality as it is a confounding variable.

In conclusion, the impact of stress on sleep quality should not be overlooked in populations with subclinical hypothyroidism.

## Disclosure

The authors report no conflicts of interest in this communication.

Correspondence: Inayat Hussain Khan  
Faculty of Medicine, St George's Hospital  
Medical School, Cranmer Terrace,  
London SW17 0RE, UK  
Tel +44 20 8672 9944  
Email m1506131@sgul.ac.uk

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