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## REPLY

## Reply to Berrouiguet et al.: Suicide prevention strategies: A need for ecological sleep monitoring



We would like to thank Dr Berrouiguet for his interest in our recent publication [1]. Recently, another meta-analysis from our research team further demonstrated that sleep disturbances, particularly insomnia, were associated with suicidality even after controlling for mood status [2]. Current evidence strongly supports associations of sleep duration and sleep disturbance with youth suicidality, independent of the presence of depression.

In his letter [3], Dr Berrouiguet highlighted that sleep measured by paper-based self-reported sleep questionnaires or wearable devices (actigraphy) have been utilized in monitoring the risks of suicide in suicidal patients [4] and people with bipolar disorder [5]. One study by Bernert et al. found that actigraphic (sleep variability) and subjective sleep parameters (self-reported insomnia and nightmares) were acute warning signs of suicidal ideation in teenagers [6]. Taking all the evidence together, we feel that the importance of sleep disorders as a biomarker for suicide risk should be recognized and there is an urgent need to develop prevention strategies for improving sleep quality.

In terms of utilizing sleep as a biomarker for predicting suicide risks, the collection of comprehensive sleep data in teens using technological advances (e.g., mobile phones and other personal devices) may be a valuable approach. Real-time sleep data collected through web-based or mobile phone-based assessment tools and sensors can provide adequate sleep information [7] and thus enhance medical decision making before or during an in-person visit, which may in turn reduce the risk of suicide.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.smr.2019.07.003>.

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