# LETTER Beware of the Relationship between Sleep Quality and Cognitive Impairment [Letter]

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## **Dear editor**

The recent study published by Koutsonida<sup>1</sup> et al in the Journal of Sleep has aroused my great interest. 2112 patients were included in the study and well followed up. This study investigated the correlation between sleep disorders and cognitive function, which is highly informative and has become one of the current international concerns. While we commend the study for its valuable contribution, we offer some constructive suggestions for further improvement.

Firstly, in this study, researchers collected information on social demographic characteristics, general health status and lifestyle data, as well as anthropometric and clinical measurements; Excluded participants with severe neurological or psychiatric disorders; A series of cognitive function assessments, including the PSQI scale and neuropsychological tests, were conducted. We have discovered a wealth of useful information from it and have been inspired by it. Once again, we would like to express our sincere gratitude to the researchers for their hard work. However, in the study, we did not find that the researchers mentioned sleep monitoring (sleep regularity may affect sleep more than sleep quality),<sup>2,3</sup> biochemical indicators and other related tests, and did not find that the impact of patients' complications on sleep was eliminated (such as hypertension, diabetes, coronary heart disease, headache and other related diseases, especially metabolic related diseases).

Secondly, for cognitive impairment caused by sleep disorders, there are many subtypes in the guidelines, and the correlation between different cognitive impairment subtypes and sleep quality may vary. One important criterion for measuring this is magnetic resonance imaging  $(MRI)^4$  evaluation. We hope to obtain relevant data and display, because the relevant indicators of cranial MRI will have a great guiding role in the treatment and progress of cognitive impairment.

Finally, we found that the cases included in this study were from 25 to 70 years old, which is a broad range. The analysis of the results also mentioned that the impact of sleep disorders on cognitive dysfunction varies among different age groups.<sup>5</sup> We hope to obtain further follow-up results, and we hope to receive further interpretation from researchers on the impact of sleep disorders on cognitive dysfunction in different age groups.

By improving and supplementing the above methods, the reliability of the research can be enhanced, and the relationship between sleep disorders and cognitive impairment can be better explained and understood. In addition, other key factors that affect sleep disorders and cognitive impairment can also be revealed. This analysis can not only increase the depth and breadth of research, but also contribute to a more comprehensive and scientific understanding of the formation of sleep disorders. In summary, Koutsonida et al's research is an important step in understanding the relationship between sleep disorders and cognitive impairment. Our suggestion is only to further improve an already excellent research. We look forward to future authors making more inspiring contributions.

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#### **Ethics Statement**

The author has confirmed that the approval of an institutional review board was not required for this work. The author also confirms that informed patient consent was not necessary for this work. The authors affirm they have read the journal's guidelines on ethical publication and affirm that this work is consistent with those guidelines.

## Disclosure

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The authors report no conflicts of interest in this communication.

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