



LETTER TO THE EDITOR

Comment on Zhang et al., “Worldwide and regional prevalence rates of co-occurrence of insomnia and insomnia symptoms with obstructive sleep apnea: A systematic review and meta-analysis”



Dear Editor,

I read with great interest the study by Ye Zhang et al. entitled [1] “Worldwide and regional prevalence rates of co-occurrence of insomnia and insomnia symptoms with obstructive sleep apnea: A systematic review and meta-analysis,” which has been recently published in the journal. They conducted a meta-analysis addressing the current data on the co-occurrence prevalence of insomnia and insomnia symptoms with OSA. They found that insomnia and insomnia symptoms are commonly seen in patients with OSA, and difficulty maintaining sleep is the most common insomnia symptom in patients with OSA.

First, about adaptation of systematic review guidelines and registrations, there have been systematic review and meta-analysis protocol registration established that help to maintain a level of homogeneity and quality across all meta-analyses and systematic reviews being conducted. PRISMA, Cochrane, JBI and MOOSE are a few examples of such guidelines [2–4]. Therefore, the lack of any mention of the use of such instructions, even though study itself follows the core principles of a systematic review and meta-analysis established in such statements/guidelines, raises the question of whether any such guideline was not used or just not mentioned.

Second, Publication bias will affect the final results of meta-analysis [5], so the recognition and processing of publication bias is an important step in systematic evaluation. The author stated in their article that their symmetry of funnel plot was assessed with Egger's tests. But there was no final conclusion of Egger's tests and its P value in the meta-analysis. Moreover, it is not rigorous to use Egger's tests without distinguishing between continuous variables and dichotomous data. For continuous data, the result of the measurement is based on the mean difference as the effect index, and Egger's tests can be selected [6]. However, for the dichotomous data, the outcome of the measurement is based on OR, and the Harbord test and Peters test should be preferred.

The heterogeneity of meta-analysis needs attention [7]. In this paper, the heterogeneity of groups is high, but the source of heterogeneity has not been explored.

In summary, meta-analysis is an important means of evidence-based medicine. The study was a failure if a lax meta-analysis were

used to produce a lax result. So it is important to evaluate and explore heterogeneity and publication bias in meta-analysis.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.smr.2019.04.001>.

References

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