

## Peer Review Report

# Review Report on Sleep traits to the risk of breast cancer disease incidence, adverse progression and mortality: Evidence from a global systematic review and meta-analysis

Original Article, Int. J. Public Health

Reviewer: Reviewer 1

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### EVALUATION

#### **Q 1** Please summarize the main findings of the study.

This systematic review and meta-analysis provide valuable insights into the associations between sleep traits and breast cancer incidence, progression, and mortality. The authors have conducted a thorough literature search and analysis of 34 studies, with results suggesting that poor sleep quality significantly impacts breast cancer outcomes, particularly in terms of disease progression and mortality. The paper makes an important contribution by examining sleep's effects across the entire breast cancer continuum rather than focusing on isolated outcomes. I recommend a few revisions to improve the manuscript.

#### **Q 2** Please highlight the limitations and strengths.

No answer given.

#### **Q 3** Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Introduction:

1. Consider strengthening the rationale for studying sleep traits specifically. While you mention various lifestyle factors affecting breast cancer risk, a brief explanation of why sleep was selected as the focus would enhance the introduction.
2. The biological mechanisms section (lines 62–78) would benefit from additional references, particularly for the statements regarding altered immune function and inflammatory responses that create a microenvironment conducive to tumor growth (lines 69–72). Recent mechanistic studies linking sleep disruption to specific cancer pathways would strengthen this important section."
3. It would be helpful to provide explanation for what constitutes "adverse progression" in your study. On line 98–99, you briefly mention it includes "tumor stage progression, recurrence and complications," but further clarification on how various study outcomes were categorized under this umbrella term would strengthen the clarity.

Methods:

4. Why did the author team choose the 2014–2024 publication date range, rather than from the early stages of the construction of the various databases?
5. When describing the use of the Newcastle–Ottawa Scale (NOS) for quality assessment, please add a reference to the original methodological paper for this tool. Similarly, a citation should be provided for the forest plot methodology used in the statistical analysis section. These references to established methodological approaches would strengthen the scientific rigor of your methods section.
6. In addition, the authors have considered the odds ratio or rate ratio or hazard ratio (OR/RR/HR) combined as pooled OR, actually, they were different, thus, it needs exploration and clarify or insert the reference.

Results:

7. Table 1 would benefit from consistent formatting of effect measures – some cells show HR values with brackets and others with parentheses.

Discussion:

8. Line 280–284: "Therefore, more research is needed to validate the effects..." – consider adding specific suggestions for future research directions.

9. Consider adding a brief comment on the implications of these findings for clinical practice and patient education.

Editorial suggestions:

10. Ensure consistent terminology throughout – for example "low quality sleep" is used while other instances refer to "poor quality sleep" or "poor sleep quality."

limitation

11. A significant limitation that should be acknowledged is the variability in how sleep quality was measured across the included studies. The heterogeneity in assessment tools (e.g., Pittsburgh Sleep Quality Index, polysomnography, self-reported measures) could affect the comparability of results and potentially influence the strength of observed associations. Although the authors have conducted rigorous quality assessment for all included studies, briefly discussing this limitation would strengthen the paper's transparency and help readers better contextualize your conclusions.

12. In addition, the language needs improve and edit thoughtfully.

PLEASE COMMENT

**Q 4** Is the title appropriate, concise, attractive?

No answer given.

**Q 5** Are the keywords appropriate?

No answer given.

**Q 6** Is the English language of sufficient quality?

No answer given.

**Q 7** Is the quality of the figures and tables satisfactory?

No answer given.

**Q 8** Does the reference list cover the relevant literature adequately and in an unbiased manner?)

No answer given.

QUALITY ASSESSMENT

**Q 9** Originality



**Q 10** Rigor



**Q 11** Significance to the field



**Q 12** Interest to a general audience



**Q 13** → Quality of the writing

**Q 14** → Overall scientific quality of the study

**REVISION LEVEL**

**Q 15** → Please make a recommendation based on your comments:

Minor revisions.