

Peer Review Report

Review Report on Sleep problems associate with multimorbidity: A systematic review and meta-analysis

Systematic Review, Public Health Rev

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EVALUATION

Q 1 Please summarize the main theme of the review.

The authors investigated the association between sleep problems and multimorbidity considering the other sleep disorders which have not been investigated systematically. The authors showed that some sleep problems are associated with multimorbidity. Especially, they revealed that sleep duration and insomnia were associated with multimorbidity. Although this is an interesting study, there are issues that need to be revisited.

Q 2 Please highlight the limitations and strengths.

Meta-analysis is being conducted, but there are limitations in the selection of analysis targets.

Q 3 Please provide your detailed review report to the authors, structured in major and minor comments.

Major point:

In general

1. As the authors mentioned from L54 to L56 in the introduction part, the novelty of this study is that they examined the association between multimorbidity and sleep disturbance such as OSA and RLS which have not been systematically investigated. The authors could not conduct a meta-analysis of factors not previously considered, although they reviewed these in results part. Given that this is a very important clinical point, this study may lack impact in terms of novelty.

2. Overall, there is a high degree of heterogeneity among the papers extracted in this study. Therefore, it is necessary to consider narrowing down the target a little more.

Abstract

3. In lines 23 to 24, the authors described that the association of poor sleep quality, OSA and RLS with multimorbidity was inconclusive, with inconsistent findings reported in studies. However, the authors did not conduct meta-analysis of these factors and I think that the author should state so. This will apply to the conclusion of the abstract as well as to the conclusion of the main body of the text.

Introduction

4. The rationale for this study is unclear. Please describe it more clearly.

Method

5. In this study, the literature examining the association between sleep problems and single diseases such as myocardial infarction, stroke, and chronic renal failure was excluded. For example, diseases such as myocardial infarction, stroke, and chronic renal failure may occur in the context of diseases such as metabolic syndrome, and thus may omit multimorbidity, which should be included. The authors should discuss about this point.

Results

6. From the Funnel plot (Figure S3 and S5), there is less publication bias in this study. However, it would be more accurate to have an Egger's regression test.

7. As the authors mentioned, there is quite a high heterogeneity of this study. Although the authors performed sub-group analysis considering this, some results (Figure S1A, S1B, S2B) still have a high heterogeneity that cannot be ignored. Thus, meta-regression analysis and tests for interactions should be considered to adjust for heterogeneity and bias. As an alternative, if the heterogeneity is really high, it should be thought of only reviewing

8. The authors should mention the presence or absence of outliers and their treatment.

9. The authors showed that the prevalence of multimorbidity increased by age in Introduction. The ages of the samples were all different in supplementary tables. Therefore, the authors should consider the influence of population age.

10. Snoring, Poor sleep quality, OSA, and RLS should also be summarized in a supplemental table.

Discussion

11. Since this paper is a systematic review, the authors should describe and discuss more about items such as Snoring, Poor sleep quality, OSA, and RLS that were not meta-analyzed.

Minor point:

12. There are generally problems with English grammar, and the English writing should be corrected

Introduction

13. In line 42 to 44, please add references to support these sentences.

14. Line 54 to 56 is not correct. There are a number of published meta-analyses.

Methods

15. Was the protocol for this review registered with PROSPERO? If so, author should mention it in this manuscript.

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes

Q 5 Are the keywords appropriate?

Yes

Q 6 Is the English language of sufficient quality?

No

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

No.

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

No

Q 9 Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)

Yes.

Q 10 Does the manuscript cover the issue in an objective and analytical manner

No.

Q 11 Was a review on the issue published in the past 12 months?

No.

Q 12 Does the review have international or global implications?

Yes, but a substantial modification is needed.

QUALITY ASSESSMENT

Q 13 Quality of generalization and summary

☒☒☐☐☐

Q 14 Significance to the field

☒☒☐☐☐

Q 15 Interest to a general audience

☒☒☒☐☐

Q 16 Quality of the writing

☒☒☐☐☐

REVISION LEVEL

Q 17 Please take a decision based on your comments:

Major revisions.