

Peer Review Report

Review Report on Associations between incident asthma with comorbidity profiles, night sleep duration and napping duration trajectories: a 7-year prospective study

Original Article, Int J Public Health

Reviewer: Wojciech Hanke

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EVALUATION

Q 1 Please summarize the main findings of the study.

The manuscript describes the results of the prospective cohort study concluding that a dominant short night sleep duration trajectory is associated with an increased risk of developing asthma, especially in individuals with depression.

Q 2 Please highlight the limitations and strengths.

Several issues indicate that such a conclusion is not supported by provided results.

1) Exposure assessment. In the prospective cohort, the investigator starts with a group of individuals free of disease(s) and divides them into two or more groups of those exposed to a different extent to a possible factor as well as those not exposed. and then follows them forward through time to determine the incidence (rate among the exposed groups and incidence rate among the unexposed ones). The unique feature of cohort design is the possibility to monitor the exposure throughout the whole period of observation.

In the presented study it is not clear if the exposure patterns were determined before the onset of the disease i.e. asthma. Information about sleep trajectories was gathered on each of the four follow-up waves during 7 years of observation. Authors inform that 2480 subjects were identified as fulfilling the criterion of short night sleep duration trajectory. However the number of person-months of exposure was not given, and as the reviewer understands not taken into account for risk estimates calculation.

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.

2) The disease identification. The number of new cases of asthma is 205. As the whole cohort was 7655 individuals the 7-year rate of 2,7% seems to be very small. The Authors should be aware that the process of significant underdiagnosis of asthma might have occurred.

3) Reverse causation possibility. The Authors suggest that a dominant short night sleep duration trajectory might affect the occurrence of asthma by mediation the effect of depression. The highest adjusted incidence(5.2%) of new-onset asthma was shown in individuals with depression. However, the presented data does not allow for the time sequence of events. It may be so that depression was rather a consequence of asthma than a risk factor. If the depression was considered a risk factor there should be a strong indication that it proceeded with the disease rather than its consequence.

The possibility of reverse causation should be carefully considered by the Authors. The cohort study usually provides opportunities to disentangle this problem.

It the table 1 the numbers of affected persons should be presented, in table 2 - the numbers of exposed (person-months) should be indicated,

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

No comments

Q 5 Are the keywords appropriate?

Yes

Q 6 Is the English language of sufficient quality?

I am not expert in this area.

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?)

Yes

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:

Major revisions.