Reviewer’s report

Title: Association between difficulty initiating sleep in older adults and the combination of leisure-time physical activity and consumption of milk and milk products: a cross-sectional study

Version: 2
Date: 24 September 2014

Reviewer: Maarit Katariina Valtonen

Reviewer’s report:

This is an interesting manuscript on the cross-sectional association between difficulty initiating sleep in older adults and the combination of leisure-time physical activity and consumption of milk and milk products. The manuscript is well-written and reports an interesting relationship between physical activity, milk consumption and sleep. I have, however, some concerns about the bias in the study. I would like the interpretation of the findings to be more cautious. Here are my suggestions for revision:

Major Compulsory Revisions

1. Introduction: I would like the authors to be clearer what the gaps in the literature are on this topic. Is there any RCTs published on milk consumption, physical activity and sleep?

2. Methods: The authors should report the period of recruitment and the data collection.

3. Methods: Please describe how the potential confounders were measured and why were those variables chosen as confounders.

4. Methods: A reader needs to know if the subjective measures, such as the physical activity and milk consumption questionnaires, are valid and reliable.

5. Results: How many people were eligible to the study? Is the sample representative of the population? What were the possible reasons for non-participation?

6. Results: In table 4 the authors report non-significant associations between LTPA or milk, and DIS. Is it possible that these groups were under-powered and therefore didn’t reach statistical significance?

7. Discussion: I would like the authors to discuss the results in both directions. Is it possible the people who sleep better are more likely to have a healthier lifestyle?

8. Discussion: I would like the authors to discuss the potential bias in this study. How did the use of sleeping medication effect the results? I wonder if the participants had any chronic illnesses or used other medications, and how that biased the results. Is there a possibility of selection bias?

9. Discussion: Are the findings generalizable to other populations?
10. Discussion: Is there any evidence that populations, who consume more milk such as in Scandinavian, people have less insomnia?

Discretionary Revisions

1. Results: Please report the covariates in the result section as well.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests