

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The joint effect of insomnia symptoms and lifestyle factors on risk of self-reported fibromyalgia in women: Longitudinal data from the HUNT study
AUTHORS	Skarpsno, Eivind; Nilsen, Tom; Sand, Trond; Hagen, Knut; Mork, Paul Jarle

VERSION 1 - REVIEW

REVIEWER	Anette Larsson Institute of Neuroscience and Physiology, Section of Health and Rehabilitation, Physiotherapy, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden.
REVIEW RETURNED	16-May-2019

GENERAL COMMENTS	<p>Introduction:</p> <ol style="list-style-type: none">1: In the Introduction it is not clear what the HUNT-study is, please clarify with a few sentences.2. HUNT is an abbreviation that should be written in full text first time it appears. <p>Materials and Methods:</p> <ol style="list-style-type: none">1. Did the participants receive any oral or written information about the study?2. Fibromyalgia: is it possible that participants who report chronic pain in more than 5 sites also have FM although not diagnosed by a physician?3. Body mass index: it is unclear how many participants were excluded due to being underweight.4. Other variables/confounding factors?: age was included in demographics but is not mentioned here.5. Information about how the participants responded regarding hypnotics/sedatives is lacking.6. Why have you included HADS? In what way is it related to insomnia or is it just to describe your population?7. If all the factors following "Other factors" are confounding factor, maybe this should be clarified. <p>Statistical analyses:</p> <ol style="list-style-type: none">1. How many participants were excluded due to not being sufficiently physically active when performing supplementary analyses, and why? Please clarify. <p>Results:</p>
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	<p>1. Describe your results and refer to the table at the end of your statement. "The risk of fibromyalgia.....,Table 2.</p> <p>2. Page 11 row 47: collapsed is not a good word. Suggest using the word merge.</p> <p>Supplementary analyses:</p> <p>1. Number of chronic pain sites is not defined in the same way as in the methods section, please clarify how the groups were formed. Were the participants who reported 5 sites or more excluded from this analysis?</p> <p>Discussion:</p> <p>1. The 2010 classification criteria for FM are provisional and are as far as I know not used in the clinical setting to diagnose FM.</p> <p>There is not any reporting of trial registration and very little about funding.</p> <p>Has the manuscript been reviewed by a native english speaking person? If not this might further enhance the quality of the manuscript.</p>
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REVIEWER	Kurt Svärdsudd Uppsala University, Sweden
REVIEW RETURNED	04-Jun-2019

GENERAL COMMENTS	<p>This is an interesting manuscript on the association between insomnia symptoms, life style factors, and risk of self-reported fibromyalgia in women. I have only a few comments.</p> <p>1. Page 6, paragraph 2: 20,415 women participated in HUNT2 and HUNT3. What was the numbers of women in the underlying population?</p> <p>2. Page 7, paragraph 2: 'Women defined as underweight ...'. How many were they?</p> <p>3. Page 8, paragraph 1: 'Based on this information ...'. Since many years a similar grading of physical activity, the Grimby-Saltin scale, exists. Why did you not use that?</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer #1 (page reference follows revised manuscript):

Introduction

1) Reviewer's comment: In the Introduction it is not clear what the HUNT-study is, please clarify with a few sentences.

Response to comment: We have removed the term "the HUNT-study" from the introduction and instead explained this in the Materials and methods (page 6, first paragraph).

2) Reviewer's comment: HUNT is an abbreviation that should be written in full text first time it appears.

Response to comment: We have corrected this in the Materials and methods (page 6, first paragraph).

Methods

3) Reviewer's comment: Did the participants receive any oral or written information about the study?

Response to comment: The invitation letter was sent by mail along with the questionnaire. The questionnaire was returned when the participants attended the clinical examination. At the clinical examination, the participants were given a second questionnaire that they were asked to complete at home and return in a pre-stamped envelope. We have elaborated on this in the Methods (page 6, first paragraph).

4) Reviewer's comment: Is it possible that participants who report chronic pain in more than 5 sites also have FM although not diagnosed by a physician?

Response to comment: Thank you for this comment. It is possible that women who reported multisite pain may have undiagnosed fibromyalgia. We therefore performed a supplementary analysis including number of chronic pain sites as a covariate in the multiadjusted models (page 10, third paragraph). However, we agree that this is a weakness of our study and have therefore mentioned this in the limitations in the Discussion (page 18, third paragraph).

5) Reviewer's comment: Body mass index: it is unclear how many participants were excluded due to being underweight.

Response to comment: Thank you for this comment. After exclusion of women with incomplete baseline information on insomnia symptoms and physical activity, 161 women were excluded due to underweight. This information is now included in the Methods section.

6) Reviewer's comment: Other variables/confounding factors? age was included in demographics but is not mentioned here.

Response to comment: Thank you. Age has been mentioned.

7) Reviewer's comment: Information about how the participants responded regarding hypnotics/sedatives is lacking.

Response to comment: Thank you for pointing this out. This has now been included in "Other factors" on page 9.

8) Reviewer's comment: Why have you included HADS? In what way is it related to insomnia or is it just to describe your population?

Response to comment: We agree that the inclusion of HADS as a covariate is questionable. We cannot be certain whether depression is affected by insomnia symptoms or vice versa, or whether depression is on the causal pathway between insomnia symptoms and fibromyalgia. It should be noted, however, that the inclusion of HADS as a covariate in the model only weakly attenuated the estimates (it does not overestimate our findings).

9) Reviewer's comment: If all the factors following "Other factors" are confounding factor, maybe this should be clarified.

Response to comment: It is uncertain whether all these factors represent confounding factors. We prefer to use the term "Other factors" because this section also includes factors used in supplementary analyses. However, we have included the following sentence: "Potential confounders were assessed at baseline" on page 8, third paragraph.

Statistical analyses

10) Reviewer's comment: How many participants were excluded due to not being sufficiently physically active when performing supplementary analyses, and why? Please clarify.

Response to comment: A total of 1,686 women were excluded from the "low" group. This has been mentioned on page 11, first paragraph).

Results

11) Reviewer's comment: Describe your results and refer to the table at the end of your statement. "The risk of fibromyalgia.....,Table 2.

Response to comment: This has been done.

12) Reviewer's comment: Page 11 row 47: collapsed is not a good word. Suggest using the word merge.

Response to comment: We agree and have changed this word.

Supplementary

13) Reviewer's comment: Number of chronic pain sites is not defined in the same way as in

the methods section, please clarify how the groups were formed. Were the participants who reported 5 sites or more excluded from this analysis?

Response to comment: Thanks for pointing this out. We have now clarified that we included number of chronic pain sites (no chronic pain, 1-2 chronic pain sites, 3-4 chronic pain sites, ≥ 5 chronic pain sites) as a covariate in the multiadjusted models.

Discussion

14) Reviewer's comment: The 2010 classification criteria for FM are provisional and are as far as I know not used in the clinical setting to diagnose FM.

Response to comment: In Norway, the 2010 classification criteria for FM are used as a helpful tool in the diagnosing of FM. Thus, it may be considered a limitation that the study did not use the most recent classification criteria for FM.

15) Reviewer's comment: There is not any reporting of trial registration and very little about funding.

Response to comment: We have included information about the grant number in Acknowledgement (page 19). Trial registration is not reported since this is not a clinical trial.

16) Reviewer's comment: Has the manuscript been reviewed by a native English speaking person? If not this might further enhance the quality of the manuscript.

Response to comment: We have now had a thorough edit of grammar throughout the manuscript.

Reviewer #2 (page reference follows revised manuscript):

Reviewers overall comment: This is an interesting manuscript on the association between insomnia symptoms, life style factors, and risk of self-reported fibromyalgia in women. I have only a few comments.

1) Reviewer's comment: Page 6, paragraph 2: 20,415 women participated in HUNT2 and HUNT3. What was the numbers of women in the underlying population?

Response to comment: At HUNT2, a total of 47,312 women were invited and 35,280 participated. At HUNT3, 47,293 women were invited and 27,758 participated. This has been included in Materials and Methods (page 6, second paragraph)

2) Reviewer's comment: Page 7, paragraph 2: 'Women defined as underweight ...'. How many were they?

Response to comment: Thanks for this comment. After excluding women with incomplete baseline information on insomnia symptoms and physical activity, a total of 161 women were excluded due to underweight.

3) Reviewer's comment: Page 8, paragraph 1: 'Based on this information ...'. Since many years a similar grading of physical activity, the Grimby-Saltin scale, exists. Why did you not use that?

Response to comment: We did not use the Grimsby-Saltin scale because our questionnaire has no information about training for competitive sports (the level 4 of the Grimsby-Saltin scale includes regular hard physical training for competitive sports).

VERSION 2 – REVIEW

REVIEWER	Anette Larsson Institution of Neuroscience and Physiology, Department of Health and Rehabilitation, Physiotherapy, Sahlgrenska Academy, Gothenburg University, Sweden
REVIEW RETURNED	08-Jul-2019

GENERAL COMMENTS	The authors have well met all points made during first revision. This is a well written and very interesting manuscript contributing to the knowledge of factors associated with the development of chronic pain.
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REVIEWER	Kurt Svärdsudd Uppsala University Department of Public Health and Caring Sciences Uppsala, Sweden
REVIEW RETURNED	04-Jul-2019

GENERAL COMMENTS	All my comments have been met. I have no further comments.
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