Reviewer's report

Title: Weight- Perception in male career Firefighters and its association with Cardiovascular Risk Factors

Version: 2 **Date:** 20 February 2012

Reviewer: Iris F Groeneveld

Reviewer's report:

Review weight perceptions in male firefighters

Interesting and relevant, but much work to do in clarification of methods and results, and elaboration of discussion.

MAJOR COMPULSARY

Abstract:

1. Conclusion: should be in line with conclusion in manuscript.

Background

2. Last sentence: Clearly state the purpose of the study.

Methods

3. What does 'METS' mean and what is its relation with oxygen consumption (see also abstract)?

Discussion

4. § 2: Did you use body fat as a measure of adiposity/ overweight/ obesity? If not, leave it out. If so, describe it in the results, provide the cut-off points for overweight/ obesity, and mention that body fat was measured in only part of the participants (and does that influence the results/ could it be biased?).

Mention as a limitation:

5. - for body fat, in some workers BIA was used and in others skin fold measures. To what extent are these measures comparable, and does it influence your results?

6. - Lack of waist circumference. WC is a strong predictor of CVD, and necessary for determining MetSyn (another reasons to leave MetSyn out).

Conclusion:

7 .- Provide the answer(s) to your research question(s).

MINOR ESSENTIAL

Whole manuscript (including abstract)

1. Check abbreviations. All abbreviations should be preceded by the whole word or term the first time they are mentioned, in the abstract as well as in the manuscript. (CRF, METS, etc)

2. Stick to 'weight perception' (not weight self-perception, weight-perception, or body perception). Be consistent.

3. Check the correctness of capitals (e.g. in 'Metabolic Syndrome', 'Body Mass Index'. Cardio-respiratory Fitness' and be consistent. Remove capitals from title.

Background

4. Last sentence: Remove last half of last sentence (' while at the same time…)

5. current § 1, first sentence: delete the word 'root'

6. current § 1 1, last sentence: delete the word ' apparently'

Methods

7. § 1: ' eligible fire departments': how did you determine the eligibility, i.e. on what basis were these departments recruited?

8. § 1: what do you mean by ' work restrictions'?

9. § 2: explain ' resting state'

10. § 3: Bruce protocol: provide reference.

11. § 5: explain outcome categories for exercise (necessary for interpretation of table 3)

12. § 7: elaborate statistical analyses, in order to better understand the results. What were the dependent and independent variables in the logistic and linear (?) regression analyses?

Results

13. MetSyn is not a continuous variable, although you used it as such in the logistic regression analyses. Explain.

Table 1:

14. Add baseline diastolic BP, total chol, chol ratio, glucose, HRR1, and pulse.

15. Revise (correct and complete) abbreviations under table.

Figure 1.

16. Unclear. explain that the colored bars represent weight perception.

17. Adjust colours; grey tones are hard to distinguish.

18. Table under the figure: remove or present as a separate table, with clear explanation of columns and rows.

Table 3.

19. unclear. Does it represent the association between CVD risk factors and underestimation of weight category (y/n)? explain in title.

20. Number of participants in whom body fat was measured is small. Explain.

Figure 2.

21. Leave out, irrelevant. Number of participants with BMI of 40 and over is negligible.

Discussion

22. § 2, 2nd sentence: ' as the self-perception of weight increased…' Incorrect, as weight perception is a dichotomous variable.

23. § 2, 3rd sentence: unclear.

24. § 2, last sentence: unclear. ' any differences based on perception are accounted for by..' ?

25. § 4: '…. especially if subjects are obese but relatively healthy they may have more underestimation of…' Replace by: ' they may be more likely to underestimate' .

26. What do you mean by adiposity? You did not introduce this term before. Better to leave out and replace by overweight/ obesity.

27. -' The results emphasize the importance of objectively measuring weight and adiposity.' Replace by the importance of 'objectively determining BMI'

DISCRETIONARY

Background

1. Change the order of paragraph (§) 1 and 2:

§ 1 According to the WHO…. ; § 2 Perception of one's…

2. Delete § 5: you mentioned this information in current § 1.

Methods

3. § 3: Is it necessary to mention ' maximal age predicted heart rate' ?

4. § 3: METS do not only depend on oxygen consumption. Provide the definition/ calculation of METS. And why did you not determine and present VO2peak?

5. § 4: You cannot just replace abdominal obesity by BMI. Explain your rationale and the limitation of doing so.

6. § 4: Leave out MetSyn, as it is composed of the variables you already present, and as information on abdominal obesity is missing.

7. § 5: was it a validated questionnaire and if so, provide validity and/or reliability

Elaborate on:

8. -overweight and obese subjects who underestimate their BMI are ' relatively ' healthy regarding CVD risk factors. Why would it be so urgent to change their weight perception?

9. - In muscular persons, would BMI 25 be a correct cut off point for overweight? Check the literature.

10. - To perceive oneself as overweight does not always lead to the intention to loose weight (which is a variable you assessed in the questionnaire). Some persons may be OK with being skinny or overweight.

11. -You measured eating habits. These are strongly related to overweight (even more than exercise) Why did you not present these in the results?

12. - Last sentence: You did not mention anything about the association between weight perception or BMI and ' healthy and 'fit' . In fact, overweight persons can be healthy and fit too. Leave out or explain in discussion.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests