Reviewer's report

Title: The Relationship between Low Back Pain and Professional Driving in Young Military Recruits

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Reviewer: Mette Korshøj Larsen

Reviewer's report:

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Comments to the BMC Musculoskeletal Disorders manuscript

The relationship between low back pain and professional driving in young military recruits

This paper investigates the relation between incidence and exacerbation of LBP among army recruits in Israel working as drivers. This analysis is relevant and the analyses are based on sound data, however the results would benefit from a discussion on implications for future interventions/studies aiming for reduction and/or prevention of LBP.

General comments

1. Overall the paper needs a clearer and strict terminology, as it is now the terminology confuses the message of the paper by using a variety of words for the same thing. Therefore, please rephrase the whole paper and settle on only one word for ex occupational group/professional group/profession/occupational profession.

2. Both the introduction as well as the discussion needs to be more focused on this specific population of army recruits, also considerations on how army recruits differ from occupational drivers are very much needed to highlight the implications of these presented results - ex. by age, physical fitness and conditioning, job seniority,
education/vocational training, psychosocial handling/coping tools as well as work conditions.

Abstract

3. The methods paragraph lacks information on type of data, how and when information on LBP were collected, also a definition of LBP would be suitable to report here.

4. Please rewrite the last sentence in the methods and clarify if soldiers are one professional group or all of the professional groups presented are among soldiers only.

5. Please provide information of the studied population in the results paragraph (ex. age, sex etc).

6. In the conclusions paragraph, please specify what the term recruitment covers - is it recruitment to study or to the army?

Introduction


8. Please add previous studies on relations between driving and LBP among army recruits in the arguments for the aim.

Methods

9. Please provide data on this study. Readers not being familiar with your previous work do not get any information out of the paragraph on data source. Therefore, please provide sufficient information on this study before comparing this study to any other studies. This also goes for the paragraph on follow up during the service.

10. Page 5, line 28, referring to another paper for crucial information for understanding the results in this paper is not warranted. Please provide all information so that the readers are able to grasp and critically read the reported results in this paper.
11. Please move the sentence page 5, line 30-35 to the discussion since it is a reflection of the results and not to be presented in the methods.

12. At page 5, line 45 you write "medical fitness" however there are no information on how this fitness was measured or what this medical fitness covers (i.e. cardiometabolic fitness/cardiorespiratory fitness/muscular strength/flexibility/balance etc). Thus, this information should be included in the manuscript. The same goes for medical profile, please provide sufficient information.

13. Also page 5, line 45, please provide a description of the medical categories, and if it is the same as medical evaluation mentioned at page 5, line 18 please use the same word throughout the paper.

14. In the results section you state that the population met the inclusion criteria, however this inclusion criteria is not mentioned in the methods. Thus, it is crucial that the criteria for inclusion are reported in the methods paragraph.

Results

15. Please provide descriptive information of the studied population in a table.

16. Please specify if the study period is the same as the follow up period, and use only one of the words if you mean the same.

17. The results paragraph lacks information of the amount of exposure and how the exposure are measured/classified, please provide this information.

18. Which assumptions were considered when building the model for analysis? Please elaborate and clearly write how the model was build, i.e. which factors were considered as covariates, did you consider moderating factors and what was the arguments for stratification based on occupational group and LBP track record?
Discussion

19. Please elaborate on the reported findings, i.e. did age and/or fitness confound/modify the results and how do you assume the very narrow age span to affect the reported results?

20. Please add a paragraph with methodological considerations of the study.

21. Please discuss your results in the perspective of previous papers among drivers, i.e. is it fair to associate findings among drivers and army recruit drivers?

22. Please elaborate on if it could be expected that these army recruit drivers have higher fitness levels than occupational drivers of all ages, and how this affects the implications of these reported findings.

23. Also, do the soldiers carry burdens/wear heavy protection gear? And does this affect/confound/modify the relation between driving and LBP?

24. Page 9, line 54 should hospitalization ration be 1.19?

25. Page 10, line 8 and 10, please use the same wording years-old/years old

26. Please include information on the standardized criteria for LBP mentioned at page 10, line 27.

27. Please describe what is meant by "job initiation" mentioned at page 10, line 35.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

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