Reviewer's report

Title: Risk factors of acute and overuse musculoskeletal injuries among young conscripts: a population-based cohort study.

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Reviewer: Rasmus Gottschalk Nielsen

Reviewer's report:

Comments to the authors
The authors have responded to all the concerns raised in the first review in a detailed and appropriate manner. The assumptions behind the Cox regression model are suitably addressed. On top, the uncertainties I had on time-scale, re-occurrences and competing risks are also addressed to an acceptable standard.

Still, there is the major issue regarding stepwise procedures. In the present manuscript, the authors do argue why they the variables are included in their model. This part is acceptable. In contrast, I do believe there is sufficient evidence in the statistical literature against the use of this approach during the past 15 years. I am unable to locate new references to cite from the statistical-oriented literature, which are in favor of the approach. Of course, it is, indeed, possible to locate articles were the approach have been used to analyze data collected in original studies (possibly because the reviewers told them to). That does not solve the problem about the inaccuracies identified in statistical literature. The article by Steyerberg et al. highlighted in my previous review is one of the articles describing these inaccuracies. The authors refer to Hosmer and Lemeshow from 1989. This reference is clearly outdated. Then, the authors argue that the confidence interval does not tend to narrow. This might be correct in the present dataset, but it does not solve the problem that estimates in the final model may be biased away from the null and p-values tend to be too small. As a consequence, I am not sufficiently convinced that the stepwise procedure is appropriate in this context.

Please cite up-to-date statistical-oriented literature, which supports the use of stepwise procedures.

Level of interest: An article of outstanding merit and interest in its field

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