Reviewer’s report

Title: Novel causes and consequences of overtraining syndrome: the EROS-DISRUPTORS study

Version: 0 Date: 08 Jun 2019

Reviewer: Julien Louis

Reviewer's report:

This article aimed to better inform on the causes and consequences of the overtraining syndrome (OTS). Although the question is sound and important for the field, the article falls far short of its goal. Many inaccuracies and lacks in the different parts of the article make it difficult to understand. For instance:

- More information is required on the methods utilised and specifically on the papers selected for analysis. The authors chose to focus their analysis on nutritional variables and sleep, but we do not know what the inclusion criteria were. I also assume that the number of OTS studies reporting dietary and sleep patterns of athletes is rather limited. As such the readers need to understand the sources of information. Therefore all the references selected for analysis should be presented in the article.

- It is also not clear whether the authors considered OTS (a rare and extreme stage of overreaching) or overreaching (which is more common and reported in several studies).

- In the methods, the authors indicate that 38 variables were taken into account in the analysis. What are these variables?

- The abstract is also not clear enough.

- The figure is incomplete as physical activity must be present to induce OTS and not just sleep and food intake. There is also no mention of a reduction in physical performance as a consequence of OTS.

- The results section includes some elements of discussion which is quite confusing.

At this stage, considering the existing literature on OTS, it is recommended to focus on experimental projects designed to identify the mechanisms of OTS rather than summaries/analyses of the literature.
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.

Unable to assess

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

No

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

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