Reviewer's report

Title: Analysis of open-water ultra-distance swimming performances in the FINA World Cup races in 5km, 10km and 25 km from 2000 to 2012

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Reviewer: Hassane ZOUHAL

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Title: Analysis of open-water ultra-distance swimming performances in the FINA World Cup races in 5km, 10km and 25 km from 2000 to 2012

Minor Essential Revisions

In this descriptive study the authors investigated the changes in sex difference across years with increasing swimming race distance from 5km to 25km. They observed that elite female swimmers showed a linear improvement in 10km but a linear impairment in 25km leading to a linear decrease in sex difference in 10km and a linear increase in sex difference in 25km. They also observed that the linear changes in sex difference suggest that women will improve in the near future in 10km, but not in 25km.

The manuscript is well written and provides some new findings on this area. Hence, several minor issues require attention.

The title must be rewritten with reference to sex difference...

In the abstract, it will be better to provide some important results as percentage of changes etc.

The introduction must address why we need to know this and what the question you are addressing is and is it really that important.

The authors have provided a detailed, yet concise, account of their study methods and experimental design. Some precisions must be addressed:
- Please provide the age and nationalities of the participants since this (especially age) may explain at least in part some differences between men and women.

For the most part, the Results are clearly and efficiently describe the findings of the study. This section requires no modifications. However, there are too many figures, please reduce.

The discussion reflect what the authors found, how it relates to the literature. However there is a lack of what it means physiologically and there is some speculations.

Please provide some practical applications for coaches and athletes.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests