Author's response to reviews

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

Authors:

Matthias A Zingg (zinadeuni@gmx.net)
Christoph A Rüst (christoph.ruest@bluewin.ch)
Thomas Rosemann (thomas.rosemann@usz.ch)
Romuald Lepers (romuald.lepers@u-bourgogne.fr)
Beat Knechtle (beat.knechtle@hispeed.ch)

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Author's response to reviews:

PD Dr. med. Beat Knechtle
Facharzt FMH für Allgemeinmedizin
Holengartenstr. 3e
9300 Wittenbach
Switzerland
beat.knechtle@hispeed.ch

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BMC Sports Science, Medicine and Rehabilitation
Prof. Gerwyn Hughes
Editor-in-Chief

Dear Prof. Gerwyn Hughes

MS: 6966700871167535 Revision 1
Analysis of sex differences in open-water ultra-distance swimming performances in the FINA World Cup races in 5 km, 10 km and 25 km from 2000 to 2012

We thank you for your e-mail from January 30, 2014.

Find below the answers to the questions raised by the editor and the reviewers.

All changes are marked in red in the revised manuscript.

We hope the revised manuscript will be suitable for publication in your journal the ‘BMC Sports Science, Medicine and Rehabilitation’. 
EDITOR'S COMMENTS:

"The article is well written prepared presents an interesting study which contributes to the literature. Generally, reviewer’s comments are favorable but some revisions are required prior to the article being acceptable for publication."

Minor comments

- Please allow spaces between numbers and units (apart from when using percentages).
Answer: We agree with the editor and changed as requested.

Also leave a space either side of the +/- symbol.
Answer: We agree with the editor and changed as requested.

- Table titles should be above the Table.
Answer: We agree with the editor and changed as requested.

- Be clear on what 'density of performance of swimmers' means. I suggest defining the in the methods section. I also suggest possibly changing the use of the word 'density' here as it implies that you assessed the body density of swimmers.
Answer: We agree with the editor and changed to ‘the power density in swimming performance’ throughout the manuscript. We inserted in the methods ‘To estimate the power density of the swimmers, the time differences between the last and the first as well as the time differences between tenth and the first were also analyzed and expressed as a percentage of the winner performance for both women and men’.

- Table 1 comprises of two tables. Either combine these tables or label separately as table 1 and table 2.
Answer: We agree with the editor and combined to one table.

- Use the word 'significant' where relevant when describing the results.
Answer: We agree with the editor and inserted where appropriate.

-p11: misspelt world, reads 'wold'.
Answer: We agree with the editor and changed as suggested.
Reviewer's report 1

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

Version: 2

Date: 13 January 2014

Reviewer: ANGELA HIBBS

Reviewer's report:
This article is well written and provides a useful insight into the under researched sport of long distance swimming. The gender differences in elite sport are an important area of research which has a huge impact for sports and the individuals taking part.

Answer: We thank the expert reviewer for her comment, no changes required.

I feel that this article highlights the need for this area to grow and for more research to take place to understand this aspect of human performance and human limitations of performance in more detail.

Answer: We thank the expert reviewer for her comment, no changes required.

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

Reviewer's report 2

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

Version: 2
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 few new findings on this area.

Answer: We thank the expert reviewer for his comment. Find below the answer to the queries.

Hence, several minor issues require attention.

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

Answer: We agree with the expert reviewer and changed the title to ‘Analysis of sex differences in open-water ultra-distance swimming performances in the FINA World Cup races in 5 km, 10 km and 25 km from 2000 to 2012’

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

Answer: We agree with the expert reviewer and inserted the important results.

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

Answer: We agree with the expert reviewer and inserted at the end of the Introduction ‘However, to date, mainly recreational swimmers have been investigated in in the 26.4 km ‘Lake Zürich Swim’ [7], the 34 km ‘English Channel Swim’ [5,19] and the ‘12 h Swim of Zürich’ [6] and there is a lack of data for elite swimmers. Additionally, the single performances of Diana Nyad and Christoph Wandratsch do not allow a generalization for the sex difference in ultra-distance swimming performance’ and ‘Additionally, in a high-level swimming race, the fastest women may have the possibility to draft behind the fastest men. This might enable the fastest women to reduce the sex difference’.

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.

  Answer: We agree with the expert reviewer and inserted the age of the annual and annual ten fastest women and men in the results with the corresponding figure. We inserted also a table with the number of finishers regarding their origin. However, we did not investigate from which country the fastest swimmers originate.

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.

  Answer: We agree with the expert reviewer and reduced to 5 figures.

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.

  Answer: We agree with the expert reviewer. We additionally inserted the aspect of skeletal muscle mass to discuss the increase in sex difference in 25 km.

Please provide some practical applications for coaches and athletes.

  Answer: We agree with the expert reviewer and inserted a separate section with the practical applications.

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