Reviewer’s report

**Title:** Sex-related differences and age of peak performance in breaststroke versus freestyle swimming

**Version:** 1  **Date:** 16 September 2013

**Reviewer:** Natasa Zenic

**Reviewer’s report:**

In general, this is an interesting and well done study. However, before publishing I will suggest some improvements in the paper design.

Authors appropriately identified the main question of the study.

In general, methods do not have fatal flows. Although, I recommended some improvements in the following text. Data sound well.

I must say that I'm not able to judge do the paper meet the Journal's standards for reporting and data deposition. So I'd rather leave this judgement to Reviewer od Editorial bord.

In general, discussion and conclusion are well balanced. However, some suggestions are offered in the following text.

The most significant critic for this paper goes for not reporting study limitations (see later)

As far as my opinion is concerned, the writing is good. However, I'm not native English speaker so I would strongly suggest Editor to seek for professional on that manner.

**Minor Essential Revisions**

**Methods:**

Normality was tested by D’Agostino and Pearson omnibus normality test. I must acknowledge that I’m not familiar with that statistical procedure. Would you please included the reference for this test, and briefly explain why did you use this test instead of those more popular (KS, Liliefors’s etc.)

**Major Compulsory Revisions**

**Introduction:**

It would be highly important to explain why the age of peak performance is so important to athletes and coaches (first paragraph of the 4th page). Mainly, as a former competitive swimmer I do understand the problem, but authors must acknowledge the issue more specifically especially with regard to Journal's overall readership.

**Methods**
You did report the age of “peak performance” but I couldn’t find no data on subjects age in general. What was the age-range of total sample?

Discussion
You should start your discussion with most important findings of the investigation. This will allow the reader to track the discussion conveniently.

The second paragraph the “age of peak performance” subheading is good. It should drive your whole paper. I strongly suggest you to put more attention on this topic.

Most important:
You must note the limitations of the study. It is even more important knowing that you have use “statistical data” which are reported from different competitions (open- vs. closed-facilities; time of the year; etc.)

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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