

General comments

Several typos. The text must be proofread and revised.

Specific comments

Abstract

Line 23: i think that “validated” is not the correct term.

Line 25: add more demographics about the participants.

Lines 35-42: add the effect size for those results.

Intro

Line 51-52: use a reference.

Line 55-56: one of the references that you use (Morais, J. E., Marinho, D. A., Arellano, R., & Barbosa, T. M. (2019). Start and turn performances of elite sprinters at the 2016 European Championships in swimming. *Sports biomechanics*, 18(1), 100-114) fits well here.

Line 84: the rationale is well constructed, but once again, this is not a validation...

Line 88: an hypothesis needs to be added.

Methods

Lines 101-106: this should be the first paragraph of the participants' section.

Line 118 and 135: at the end of the file, these seem to be switched. Please revise if so. Also the figure with the two technique must clearly mention which one is which in the legend.

Line 166-167: a reference is needed.

Discussion

Lines 224-231: see these references to support and help discuss these findings and statements during the discussion section:

- Morais, J. E., Barbosa, T. M., Oliveira, J., atiana Sampaio, T., Silva, A. J., & Marinho, D. A. (2022). Normative data of the start in the 50 m events at the 2021 LEN European Championships and understanding its relationship with the final race. *European Journal Of Human Movement*, (49), 71-84;
- Morais, J. E., Barbosa, T. M., Lopes, T., Simbaña-Escobar, D., & Marinho, D. A. (2022). Race analysis of the men's 50 m events at the 2021 LEN European championships. *Sports Biomechanics*, 1-17.

Lines 243-245: I understand using these references, but these are “outdated” and may not clearly report to race analysis. Please see the works of Morais and co-workers (p.e. Morais, J. E., Barbosa, T. M., Silva, A. J., Veiga, S., & Marinho, D. A. (2022). Profiling of elite male junior 50 m freestyle sprinters: Understanding the speed-time relationship. *Scandinavian Journal of Medicine & Science in Sports*, 32(1), 60-68.) and Gonjo and co-workers (Gonjo, T., & Olstad, B. H. (2020). Start and turn performances of competitive swimmers in sprint butterfly swimming. *Journal of sports science & medicine*, 19(4), 727.) regarding these aspects of race analysis. We have already used some of Veiga and Tomic (well done).

The previous two references of Morais and co-workers may also help here, because are backstroke related.

Lines 350-352: you must revise this sentence or add a reference. You did not measure propulsion!

Overall, I think that the sections/paragraphs of the discussion should be clearly divided. The way it is, it doesn't seem very clear while reading.

Conclusions

Lines 370-374: this part should be at the end of the discussion section and a little bit more elaborated. P.e., using Kinovea for the angle measurement. This should also be expanded in the methods section.