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OPEN PEER REVIEW

Post-activation Potentiation: Effect of Recovery Duration and Gender on Countermovement Jump, Agility, and Linear Speed in Team-Sport Athletes

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

1 comment · 20 Jan 2023

Referee 1 Reviewer

MAJOR REVISION 20 Jan 2023

The effect of recovery time duration and sex on countermovement jump, agility, and linear speed in team-sport athletes

1- There are many language mistakes. The article should be rechecked using Grammarly.
2- Change (countermovement jump) to plyometric exercise in the title and all articles.
3- The % intensity should be reported; high-intensity and heavy strength exercises may not be allowed in research. And how can the same intensity and heavy training be used for males and females simultaneously?
4- Some factors have affected training (training age, BMI, physiological variables), but you didn't mention them.
5- Sports Performance in the keywords is not related to your topic. This should be revised.
6- Heavy strength exercises have been repeated many times. Do you mean resistant training? If you do, please change it.
7- Where are the data on the normality of the distribution? How did you start before checking that? This is not possible.
8- Before Participants, write the methodology.
9. In the statistics section, you mentioned that you used a two-way GLM with repeated statistics, but in the Physical Performance Tests results, you used ANOVA. . .. .
10. The results and discussion need to be rewritten again.

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Response to Reviewers

We are extremely grateful to the reviewers for the informative comments and useful suggestions that have been provided which have helped us to improve our manuscript. We have taken all the comments and suggestions into account and provided answers in the revised version of our manuscript.

Reviewer 1:
Dear author/s,
Thank you for your submission to the AJSM.

Here are my comments:
Q1. Please ask a native speaker to double-check the writing of the paper and especially the academic terms.

A1. The paper has been written by a native English Speaker with the principal author holding a BSc, MSc, and PhD from a University in the United Kingdom, and over 30 publications and 2 book chapters in international peer-reviewed journals. In addition, 4 other members of the team have a Masters or PhD from British Universities. Combined, the team has more than 100 published manuscripts in the English language and a wealth of experience writing many manuscripts. Some of the terms used might not be so common for non-native speakers. However, the full manuscript has been checked by a Professor in the United Kingdom, with typos and unclear sentences changed accordingly to ensure it has been simplified and is easier to read.

Q2. Abstract: you cannot start it with an abbreviation.

A2. Thanks for the comment, the abbreviation has been changed as requested and the abstract has been checked and changed.

Q3. Please replace sex with gender in your paper.

A3. Thanks for the comment. We have replaced this as requested.

Q4. Your writing is very difficult to understand.

There are too many abbreviations without definitions.
The title of your paper, method, and results are not in one line.

A4. Thanks for the comment. I have changed the paper to simplify and make it easier to read for individuals. Abbreviations have now only been used for PAP, with the definition stated.

Q5. Introduction: Too many abbreviations and difficult to follow.

A5. Abbreviations have been reduced, with only PAP and CMJ used as an abbreviation within the manuscript.

Q6. It is written in a messy format.

A6. Thanks for the comment, we have changed sentences for clarity and re-structured parts of the manuscript to ensure it is not as messy and simplified.

Q7. As you are talking about biomechanical aspects and warm-up protocol, it seems interesting to add a paragraph related to functional disability in this sport that could lead to musculoskeletal pains. See Farahbakhsh, F., (2018). Neck pain and low back pain in relation to functional disability in different sport activities. Journal of exercise rehabilitation, 14(3), 509.

Q7. Thanks for the comment, we are not talking about biomechanical, we simply mention that a RAMP protocol assists with inducing readiness in biomechanical aspects. Our paper is not about biomechanical aspects as we do not assess this, therefore the paper is not relevant to this study as it is discussing functional disability, around injury. Our paper is focused on how a post activation potentiation conducted as part of the warm-up potentially improves sporting performance. We are not discussing injury prevention or injury aspects. However, this would be an interesting topic to research and discuss in the future.

Q7. This section is written such a review of the literature, not an organized introduction. The novelty of your work and hypotheses are missing.

A7. Thanks for the comment, we have changed the introduction, accordingly, added information around the paper novelty and added the hypotheses section.

Q9. Methods: Please rewrite it based on a standard format.

A9. Thanks for the comment, we have changed the format in-line with 3 manuscripts previously published in this journal by several of the authors. They have been changed and clarified in text.

Q10. Results: It is too long and difficult to understand. Please ask a statistician to help you.

Q10. Thanks for the comment, we have made the results section smaller and easier to read with the help of the paper statistician.

To make it easier to understand we have followed previous manuscripts published in the journal and followed a similar structure. This has now been subdivided into different sections.

Q11. Discussion: The theory behind your findings is missing.
Your comparison with previous studies needs more details for comparing.
Conclusion: It is not in line with your findings.

A11. Thanks for your comment. We have changed the discussion to discuss in more detail comparison with different studies and incorporate the theory behind our findings.

Reviewer 2:
the effect of recovery time duration and sex on countermovement jump, agility, and linear speed in team-sport athletes

Q12- Many language mistakes. The article should recheck Grammarly.

A12- The full manuscript has been checked by a Professor in the United Kingdom, with typos and unclear sentences changed accordingly to ensure it has been simplified and is easier to read. For more information see A1.

Q13- Change (countermovement jump) to plyometric exercise in the title and all articles.

A13 – Thanks for the comment. We have not performed plyometric exercise. We have performed a countermovement jump test. This is a well known test previously used in many similar studies, so changing this term to plyometric exercise would not fit with the manuscript. The Countermovement Jump (CMJ) is a vertical jump test performed by having an athlete quickly squat to a self-selected depth and then jump as high as possible. See following manuscripts if unclear:

Markovic, Goran, et al. "Reliability and factorial validity of squat and countermovement jump tests." *The Journal of Strength & Conditioning Research* 18.3 (2004): 551-555.

Cormack, Stuart J., et al. "Reliability of measures obtained during single and repeated countermovement jumps." International journal of sports physiology and performance 3.2 (2008): 131-144.

Barker, Leland A., John R. Harry, and John A. Mercer. "Relationships between countermovement jump ground reaction forces and jump height, reactive strength index, and jump time." The journal of strength & conditioning research 32.1 (2018): 248-254.

Barker, Leland A., John R. Harry, and John A. Mercer. "Relationships between countermovement jump ground reaction forces and jump height, reactive strength index, and jump time." The journal of strength & conditioning research 32.1 (2018): 248-254.

Rago, Vincenzo, et al. "Countermovement jump analysis using different portable devices: implications for field testing." Sports 6.3 (2018): 91.

Q14- It should be written the % intensity (high-intensity and heavy strength exercises) may not be allowed in research. And how can the same intensity and heavy training be used for males and females simultaneously.?

A14. Thanks for your comment. The same intensity is not used, it is clearly stated in the methodology that “participants were asked to perform one set of 5 repetitions of back-squat at 85% 1 repetition maximum”. This was different for all individuals hence they were tested, see point 3.3 Design.

Q15- Sports Performance in keywords is not related to your topic. Should revision.

A15. Thanks for the comment. We have changed this to team-sports.

Q16- Heavy strength exercises have been repeated many times. Do you mean resistant training? If you do, please change it.

A16. Thanks for the comment. We refer to heavy strength exercises, as previous papers refer to this, as the exercise is 85% of 1 repetition max, which was used as part of the warm-up strategy.

Q17- Where is normality data distribution? How you started before doing that? Not be possible.

A17. Thanks for your comment. We have added this into our Statistical analysis as requested. In our previous paper related to this topic area we were asked to not include this so followed that previous request.

Q18- Before Participants, write the methodology.

A18. Thanks for your comments. We have followed the same structure as several manuscripts previously published in this journal and three manuscripts published in this journal by the same group of researchers, so decided to follow the same structure for clarity for readers.

See

Avazpour et al 2020. The Effect of Two Types of High-Intensity Interval Training on Serum Value of GH and IGF-1 in Overweight Nurses.

Ishak A, Ahmad H, Wong F Y, Rejeb A, Hashim H A, et al. Two Sets of Dynamic Stretching of the Lower Body Musculature Improves Linear Repeated-Sprint Performance in Team-Sports.. Asian J Sports Med. 2019;10(3):e91775. https://doi.org/10.5812/asjsm.91775.

Breukelman G J, Shaw B S, Basson A K , Djarova T G, Millard L, et al. Immune Function Response Following a Low-carbohydrate, High-fat Diet (LCHFD) in Patients

with Type 2 Diabetes. Asian J Sports Med. 2021;12(1):e106582. https://doi.org/10.5812/asjsm.106582.

Hazratian M , TaheriChadorneshin H, Rashidi A . The Effect of One Bout of Intensive Judo Exercise on Select Hematological and Immunological Parameters in Adolescent Elite Judo Athletes. Asian J Sports Med.

Zhou X, Imai K, Liu X, Chen Z, Watanabe E. Assessing the Association of Shoulder Pain Risk with Physical Fitness in Badminton Players at National Tournament Level. Asian J Sports Med. 2022;13(4):e129916. https://doi.org/10.5812/asjsm-129916.

Pullinger S A, Rejeb A, Varamenti E, Cardinale M. Training Load and Injury Incidence Over One Season in Adolescent Arab Table Tennis Players: A Pilot Study. Asian J Sports Med. 2019;10(3):e84592. https://doi.org/10.5812/asjsm.84592.

Q19. has it been mentioned in statistics that you used A two-way GLM with repeated statistics but in
Physical Performance Tests results in you used ANOVA…….

A19. We have re-written the results for clarity. In the United Kingdom, a GLM with repeated measures is a linear model used in ANOVA by allowing any other type of distribution of the residual. We understand this might have come across confusing so have taken this out to ensure more clarity.

Q22. Results and discussion need to be rewritten again

A22. Thanks for your comment, we have re-written the discussion and results section as requested by both reviewers.

2 Revision 1

1 comment · 28 Apr 2023

SHIMAL HAMZA HAMAD CHOMANI Reviewer

MINOR REVISION 28 Apr 2023

- The paper needs a grammar check.
- In the keywords, change male and female to gender.
- The aim and importance of the study should be in the last paragraph of the background of the study.
- The introduction needs to proceed from general to specific.
- The methodology needs to mention the methods applied in this study. For example, state whether the researchers used the experimental method with a randomized trial.
- Discussion: each variable has to be presented clearly.
- There are many sentences in bold in the discussion. Remove the bold formatting.
- Before performing statistical analyses, you have to check whether the data are normally distributed. After that, you can analyze the results statistically.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Response to Reviewers

We are extremely grateful to the reviewers for the informative comments and useful suggestions that have been provided which have helped us to improve our manuscript. We have taken all the comments and suggestions into account and provided answers in the revised version of our manuscript.

Q1. The paper needs a grammar check.

A1. The paper has been checked for grammar by 2 native English speakers and changes have been made accordingly.

Q2. In keywords used male and female change to gender.

A.2 Thanks for the comment, this has now been changed to gender.

Q3. the aim of the study and the importance of the study should be in the last paragraph of the background of the study.

A3. Thanks for the comment. This has now been put as the last paragraph of the introduction and no longer the objectives section. We have put the importance and aim of the study together.

Q4. the introduction should need to start from general to specific.

A4. Thanks for the comment. The introduction has been changed to start from more general to specific.

Q5 methodology needs to mention the methods which are applied for this study. for example, the researchers have used the experimental method with randomized trial.... or nay.

A5. Thanks for the comments. We have added this information in the design (2.3) of the methodology.

Q6 discussion: each variable has to show clearly.

A6. Thanks for the comment. We have changed the methodology to discuss each variable clearly.

Q7 from the discussion, there are many sentences in bold. change to unbold.

A7. Thanks for the comment. All the bold is now unbold throughout the full manuscript.

Q8 before statistics you have to do normal data distribution. After that, you are able to do the result statistically.

A8. Thanks for the comment. We have mentioned that we did normal distribution:

The normality of distribution was examined using the Shapiro-Wilk test, confirming the homogeneity ($P > 0.05$).

Once this was done and all homogeneity confirmed, we proceeded with statistical analysis as mentioned in section 2.5

3 Revision 2

0 comments

No public comments in this round.