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OPEN PEER REVIEW

Enhancing Speed, Agility, and Anaerobic Capacity via a Tuja-Shuttle Run Exercise Model

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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

2 comments · 14 Feb 2023 – 20 Feb 2023

Associate Editor

MAJOR REVISION 14 Feb 2023

Dear author,
Based on my review of your manuscript, you should revise the introduction and methods sections according to the CONSORT standards for clinical trials. Moreover, there is no sign of novelty in this manuscript. For example, you stated in lines 48-50 in the introduction that previous studies have shown that HIIT exercises can increase power and agility. In this field, no gap has been identified, or at least mentioned, in the studies. Therefore, as a referee, I could not be convinced of the necessity of conducting this study.
In the methods section, you should provide information about sample size calculation, blinding, assignment, and all aspects of the conduct of the study. Your work in this form cannot be accepted for publication. You should provide exact information about the testing protocol, for example, the sprint and agility tests. I stopped reading your manuscript when I reached the results because the above issues should be addressed in the manuscript.

Editor-in-Chief

MAJOR REVISION 20 Feb 2023

Dear Authors
According to the reviewers' and associate editor's comments, your article requires major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

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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.

Tutur Jatmiko
Doctoral Program of Sport Science
Postgraduate Program, Universitas Negeri Surabaya

Dear
Editor in Chief
Middle East Journal of Rehabilitation and Health Studies

Thank you very much for your helpful review. We have carefully studied the comments and suggestions and revised our paper accordingly. The following are our point-by-point responses to the comments. We hope that the revisions are acceptable and that our response adequately addresses the reviewer's comments. Thank you very much for your kind consideration.

Sincerely,

Tutur Jatmiko and co-authors

Responses to comments from Reviewer #1

Dear Reviewer. Thank you very much for your kind consideration, your valuable comments, and your comprehensive suggestions for our manuscripts. The constructive suggestions for this manuscript are crucial to improve the betterment of understanding from the global academic audiences. According to your positive comments, the brief explanation for your valuable feedback is as follow:

No	Reviewer Comments	Response
1	As i reviewed your manuscript, you should revise the introduction and methods section according to the standard of CONSORT for clinical trial. Moreover, There is no sign of novelty in this manuscript. For example, you stated in line 48-50 in the introduction, previous studies have shown that HIIT exercises can increase power and agility. And in this field, no gap have been seen or at least mentioned in the studies. Therefore, as a referee, I could not be convinced about the necessity of conducting this study.	▪ Thank you very much for the positive response and constructive suggestions from the reviewer. We have revised the introduction, methods, and results, hopefully, the improvements we make can answer your doubts in our article.
2	In the methods section, you should provide information about sampling size calculation, blinding, assignement, and anythings about the conduction of the study. Your work in this form can not be accepted for publication. you should provide exact information about the testing protocol for example sprint and agility test. I stoped readig your manuscript up to the results because the aboved issues should be addressed in the manuscript.	▪ Thank you very much for the positive response and constructive suggestions from the reviewer. ▪ We have revised the methods hopefully, the improvements we make can answer your doubts in our article.

2 Revision 1

3 comments · 16 May 2023 – 13 Jun 2023

Masoud Mirmoezzi Reviewer

MAJOR REVISION 16 May 2023

The reviewer wants to thank the authors for their efforts in preparing the following manuscript, although some corrections and modifications should be made to improve its quality.

Associate Editor

MAJOR REVISION 12 Jun 2023

Dear author
Another assignee and I reviewed your revision. Previous concerns about the manuscript have been adequately addressed. However, some issues still exist in this revision.
1-The introduction is very comprehensive, and some unnecessary data are presented in this section. You might be able to delete and summarize some sentences in the introduction.
2-In the methods section, you should provide exact information about the sampling method, sample size calculation, blinding, ethical issues, informed consent, and other parts of a CONSORT form. However, I cannot see these explanations in this revision.
3-My major concern is about your performance testing protocol. First, you stated "Speed was measured using the 20-meter sprint test"; however, you report the time for the 20-meter sprint test in the results, and you also report time for agility.
Moreover, what about the "RAST" in your study? Is this a laboratory procedure? You reported the anaerobic capacity as " mmol/L" in the results section; however, I cannot see the exact information about the measurement.
You should explain the testing protocol in enough detail that another researcher can follow the same procedure or conduct another study. However, this is not the case now.

Editor-in-Chief

MAJOR REVISION 13 Jun 2023

Dear Authors
According to the reviewers' and associate editor's comments, your article requires major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

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.

Tutur Jatmiko
Doctoral Program of Sport Science
Postgraduate Program, Universitas Negeri Surabaya

Dear
Editor in Chief
Middle East Journal of Rehabilitation and Health Studies

Thank you very much for your helpful review. We have carefully studied the comments and suggestions and revised our paper accordingly. The following are our point-by-point responses to the comments. We hope that the revisions are acceptable and that our response adequately addresses the reviewer's comments. Thank you very much for your kind consideration.

Sincerely,

Tutur Jatmiko and co-authors

Responses to comments from Reviewer #1

Dear Reviewer. Thank you very much for your kind consideration, your valuable comments, and your comprehensive suggestions for our manuscripts. The constructive suggestions for this manuscript are crucial to improve the betterment of understanding from the global academic audiences. According to your positive comments, the brief explanation for your valuable feedback is as follow:

No	Reviewer Comments	Response
1	The reviewer want to thank authors for their efforts in preparing the following manuscript, although some corrections and modifications should be made to improve its quality.	▪ Thank you very much for the positive response and constructive suggestions from the reviewer. We've made some changes to this article.

Responses to comments from Associate Editor #1

Dear Associate Editor. Thank you very much for your kind consideration, your valuable comments, and your comprehensive suggestions for our manuscripts. The constructive suggestions for this manuscript are crucial to improve the betterment of understanding from the global academic audiences. According to your positive comments, the brief explanation for your valuable feedback is as follow:

No	Reviewer Comments	Response
1	I and one another assignee reviewed your revision. Previous concerns about the manuscript has been eliminated well. However, some issue are still existed in this revision.	▪ Thank you very much for the positive response and constructive suggestions from the Associate Editor.
2	Introduction is very comprehensive and some unnecessary data is explained in this section. You might be able to delete and summarize some sentences in the introduction.	▪ Thank you very much for the positive response and constructive suggestions from the Associate Editor. ▪ We have revised some data that do not need to be explained in the introduction and summarized a few sentences in the introduction.
3	The method section. you should explain the exact information about the sampling method, sample size calculation, blinding, ethics issue, informed consent, and other parts of a CONSORT form. However, i can't see these explanations in this revision.	▪ Thank you very much for the positive response and constructive suggestions from the Associate Editor. ▪ The sampling technique in this study used purposive sampling. Pusposive sampling is a sampling technique with certain considerations. Certain considerations, namely the existence of criteria, namely the sample is East Java Women's Handball Athletes, aged 17-26 years, and joining training sessions for the National Sports Competition (PON) by the Ministry of Sports Indonesia. Based on these criteria, a total of 14 samples were obtained. ▪ All procedures applied in this study complied with the World Medical Association's Helsinki Declaration on the ethics of conducting research involving human subjects and have been approved by the Health Research Ethics Committee, Faculty of Public Health Universitas Airlangga, Surabaya No: 45/EA/KEPK/2021. ▪ High-intensity interval training (HIIT) with Tuja-Shuttle Run Exercise Model performed with 6 sets of 3 reps, intensity 85-95% HRmax, frequency 3x/week during

		8 weeks. The duration of each training session is 60 minutes divided into a 10-minute warm-up, 40-minute core exercises and a 10-minute cool-down session. Polar heart rate monitor (Polar H10 Heart Rate Sensor, Inc., USA) used for monitoring heart rate during intervention. The implementation of the HIIT with Tuja-Shuttle Run exercise model was shown in the following Figure 1 for one repetition. ▪ Speed was measured using the 20-meter sprint test, agility was measured using the Illinois Agility Test (IAT), while anaerobic capacity was measured using the Running-Based Anaerobic Sprint Test (RAST). Speed, agility, anaerobic capacity measured pre-intervention, and 24 hours post-intervention.
4	Moreover, what about the "RAST" in your study? Is this a laboratory procedure? you reported the e anaerobic capacity as " mmol/L" in the results section however, i cant see the exact information about the measurement.	▪ Thank you very much for the positive response and constructive suggestions from the Associate Editor. ▪ We want to clarify that there was an error in entering the unit, in this study the unit of anaerobic capacity used Joules (J) with the Running-Based Anaerobic Sprint Test (RAST) measurement method. ▪ RAST procedure: 1. The initial attitude of the participants stands behind the start line. 2. On the signal "READY" the participants take a standing start stance, ready to run. 3. On the signal "YES" by sounding the whistle, participants run as fast as possible, cover a distance of 35 meters, for 6 sets, and each set rest 10 seconds until the 6th set. 4. Record each time between sets from the "yes" signal to the "whistle" signaling the end time obtained during a 6-set run, then the data is converted through the RAST Calculator test and the anaerobic capacity is taken

		(Walker, 2016).  Figure 1. RAST test implementation flowchart
5	You should explain the testing protocol as exact that another researcher can access the details in the same way or can do another study. However, this is not the case now.	▪ Thank you very much for the positive response and constructive suggestions from the Associate Editor. ▪ We have revised by adding the HIIT with Tuja-Shuttle Run Exercise Model protocol and data collection procedures in this study.

3 Revision 2

2 comments · 12 Jul 2023 – 15 Jul 2023

Associate Editor

ACCEPT 12 Jul 2023

There are no comments on this revision.

Editor-in-Chief

ACCEPT 15 Jul 2023

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other qualified articles from your group.