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OPEN PEER REVIEW

The Effect of Professional Sports Participation on Bone Content and Density in Elite Female 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 · 12 Nov 2021

Referee 1 Reviewer

MAJOR REVISION 12 Nov 2021

This manuscript is a continuation of the research that is being done on the effect of different types of exercises on bone mineral density. But there are some items that need to be explained more in this manuscript.

Introduction:

1. Female athlete triad is an acceptable term for the syndrome. I recommend changing “Women’s Triple syndrome” to “female athlete triad”.

2. The definition of female athlete triad has changed based on the American College of Sports Medicine (ACSM) position stand, The female athlete triad, published in 2007. Therefore, the authors should change the definition of the triad based on this article.

Method:

To estimate BMD in young athletes, the Z score is more valuable than the T score, and it is not necessary to report both.

2. To compare different types of sports, the authors did not mention the subtypes of runners participating in the research. Are they endurance runners or speed runners?

The effect of their training is different and could change the results of this research.

Endurance athletes are more prone to female athlete triad than speed athletes.

3. How did they calculate the sample size? As the authors mentioned in the limitations section, the low number of athletes could change the results.

Result

It is better to omit the T scores of athletes in different sports.

Discussion is acceptable based on their findings.

Limitation

Besides the small sample size, the other limitation is the type of research (cross-sectional study). If the study design were based on follow-up of these athletes, changes in BMD would be more apparent based on the type and duration of training.

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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.

Response to reviewers:

Reviewers' Comments:

Reviewer 1:

Introduction:

1.Female athlete triad is acceptable terms for the syndrome. Recommend to change "Women's Triple syndrome" to "female athlete triad"

Answer: corrected

2. Definition of Female athlete triad is changed based on The American College of Sports Medicine (ACSM) position stand. The female athlete triad in 2007 . Therefore, authors should change the definition of the triad based on this article

Answer: corrected

Method:

To estimate BMD of young athletes , Z score is more valuable than T Score and it does not necessary to report both items.

Answer: corrected

To compare different types of sports, authors did not mention the sub types of runners participating in the research. Are they endurance runners or speed runners? Because the effect of their training is different and could change the result of this research. Endurance athletes are more prone to Female athlete triad than speed athletes.

Answer: corrected

Result

It is better to omit T score of athletes in different sports .

Answer: corrected

Discussion is acceptable based on theirs finding.

Limitation

on beside of low number of sample size, the other limitation is type of research (cross sectional study). If study design was based on follow up of these athletes, change of BMD is more apparent based on type and time of training.

Answer: corrected

Reviewer 2:

Thank you for the opportunity to review the article entitled "The effect of professional sport participation on bone content and density in elite female athletes". Despite the interesting nature of the manuscript, the introduction and results are a bit disapointing and should be rewritten. The writting of this manuscript should be enhanced by a native English speaker. I could not recommended it for publication in this format.

Answer: Corrected as much as possible

Major comments:

Introduction is too long and non-relevant. Introduction (Context) is too long and it does not present a clear rationale to provide support the objective. The introduction can be improved if it follows the order of known>unknown>question/aim. The unknown issue and question not clear. At the end of the introduction, I recommend inserting the research hypotheses more clearly because they are not in the text. Don't forget to bring them again to the "discussion" topic.

Answer: Corrected as much as possible

Please add the reference for this sentences "according to WHO definitions, >−1.0 SD shows the normal BMD, ≤−1.0 SD, >−2.5 SD indicates osteopenia and ≤−2.5 SD demonstrates 109the osteoporosis. It should be mentioned that lumbar spine and femur neck areas were measured 110based on T and Z scores." Bone fracture is essential criterion for osteoporosis diagnosis.

Answer: Corrected

The results didn't have a logical sequence in the text and tables. A general complaint is that the authors unnecessarily included all the results in the text of the article in detail. They could summarize them in the table and/ or diagrams.

Answer: Corrected

The discussion is too weak. The discussion section needs to be described scientifically. Kindly frame it along the following lines:

i. Main findings of the present study

ii. Comparison with other studies

iii. Implication and explanation of findings

iv. Strengths and limitations

v. Conclusion, recommendation, and future direction.

Answer: Corrected as much as possible

5- This study is a cross sectional study. The conclusion didn’t support the findings of this study. The conclusion should be revised based on the main findings of the study. It should be revised based on the main findings of the study.

Answer: Corrected

Small sample size and cross sectional study are 2 weak points of the method of this study. It should be mentioned as limitations of the study.

Answer: Corrected as much as possible

Minor comments:

References should be up dated.

Answer: Corrected as much as possible

Abstract: Remove the discussion topic from the summary.
Answer: corrected

Review your choice of keywords. All of them should commonly be Mesh Term, so that the study can be found in quick searches in the databases.
Answer: Corrected as much as possible

Introduction: Paragraph 1, Line 7: References expressed in numbers, please adjust according to the rest of the text.
Answer: corrected

Discussion: The objective described in the discussion is different from that described in the introduction. Please choose the most appropriate objective (which seems to me to be that of the discussion) and describe it in the same way throughout the follow-up of the manuscript.
Answer: objective in introduction corrected

Paragraph 2: line 1-2: Insert references.
Answer: corrected

Paragraph 2: line 3: References expressed in numbers, please adjust according to the rest of the text.
Answer: corrected

Clinical implications: I suggest adding in this item, not only future suggestions, but the relevance of its results to clinical practice, information already contained in other parts of your manuscript. I suggest just scoring them on this item. This should contain between 2-5 bullet points highlighting the immediate usefulness and/or implications of the study's findings for clinicians.
Answer: corrected in bullet points

2 Revision 1

0 comments

No public comments in this round.