LETTER TO THE EDITOR

Comment on Huma Riaz, et al. (J Pak Med Assoc. 72: 1904-1908, 2022)

Effects of high-intensity multi-modal exercise training (HIT-MMEX) on bone mineral density and muscle performance in postmenopausal women. A Pilot randomized controlled trial

Rooma Rouf Chughtai,[1] Farooq Azam Rathore[2]

Madam, We have read the article "Effect of high intensity multi modal training (HIT-MMEX) on bone mineral density and muscle performance in post-menopausal women: A pilot randomized control trial." by Huma Riaz et al with interest.[1] Considering that number of randomized clinical trials (RCT) published from Pakistan is low, this is a welcome addition to the local biomedical literature. Reduced bone mineral density in post-menopausal women has not received much attention in Pakistan. This study will likely help in increasing the awareness about the importance of exercises in maintaining bone and muscle health of post-menopausal women.

Since an RCT is considered as the gold standard of clinical research, therefore it should be conducted and reported according to the reporting guidelines.[2] We reviewed this article using (Critical Appraisal Skills Programme) CASP checklist for Randomized control trials (https://casp-uk.net/images/checklist/documents/CASP-Randomised-Controlled-Trial-Checklist/CASP-RCT-Checklist-PDF-Fillable-Form.pdf) as part of critical appraisal of the literature. While this article ranked adequately on most parameters, there were some areas of concern that we would like to highlight as follows.

1. The study protocol available at https://clinicaltrials.gov/ct2/show/NCT04653350, mentions enrollment of 58 patients. Whereas in this study authors have enrolled and reported only 29 patients. This is deviation from the registered protocol and should be explained.
2. It is important to report Confidence intervals in an RCT. This is not reported in this report.[3]
3. The baseline demographics of both the groups have been compared in table 1 which only mentions weight, height, and age of the subjects. There are many other important factors that can affect baseline bone and muscle health in females. These include the history of previous calcium and vitamin D intake. In Pakistan a physician's prescription is not necessary to buy medications from the medical stores and multivitamins including calcium and vitamin D supplementations are widely used. This could affect the bone health of the participants. In addition, employment status can be an important confounding factor. Bone health can differ between a female employed in sedentary job requiring prolonged sitting hours (e.g. banker or secretary) and that of a female who is in a job requiring walking and moving around e.g. polio vaccinator or lady health worker). Exercise habits can also affect bone and muscle health. A female regularly doing even light exercise will have a better bone and muscle health compared to a female who does not perform any kind of exercise. In addition, fertility can be an important confounding factor. An old lady with 5 children is unlikely to have the same bone and muscle health/condition as of a middle-aged female with only one child. These important confounding factors were neither documented nor mentioned in the article and can be source of bias while interpreting the results.
4. The age range included in this group varies widely from 45 -70 years. In our opinion, a subgroup analysis of different age groups is mandatory since results from 45 years old cannot be directly compared to that of a 70-year-old female.
5. The CONOSRT figure for an RCT is missing in the manuscript. It is a mandatory reporting requirement for an RCT

While this is an important and useful study, a critical appraisal highlighted the above-mentioned points which warrant explanation and clarification.

Department of Rehabilitation Medicine, PNS Shifa Hospital, Karachi, Pakistan.
Correspondence: Roma Rauf. Email: roma.rauf77@gmail.com

References

1. Riaz H, Babur MN, Farooq A. Effects of high-intensity multi-modal exercise training (HIT-MMEX) on bone mineral density and muscle performance in postmenopausal women. A Pilot randomized controlled trial. J Pak Med Assoc 2022; 72 (10)1904-08. DOI: https://doi.org/10.47391/JPMA.5394
2. Consort transparent reporting of trials; 2010 available from: https://www.consort-statement.org/consort-statement/checklist
3. Al-Jundi A, Sakka S. Critical Appraisal of Clinical Research. J Clin Diagn Res. 2017 May;11 (5):JE01-JE05. doi: 10.7860/JCDR/2017/26047.9942