Reviewer's report

Title: The effect of home-based low-volume high-intensity, low-volume interval training on cardiorespiratory fitness, body composition and cardiometabolic health in women of normal body mass and those with overweight or obesity: protocol for a randomized controlled trial.

Version: 1 Date: 12 Nov 2019

Reviewer: Evelyn Parr

Reviewer's report:

R2: The authors have done an excellent job of addressing many of the concerns required by both reviewers. The major concern still remaining is the sample size and power calculations. For a small effect size, a group size of 21 per group (with four groups) seems very small and due to the heterogeneity of responses to exercise training I urge the authors to be clear when they are stating how their power calculations are devised. It would make more sense for two groups of 42 each to be assessed with a small effect size, but when this is further devised into two more groups I am not convinced there is enough power. What software was used for these calculations? Is VO2peak change measured in absolute (L/min) or relative (mL/kg/min) units? As this will have an effect and should be clearly stated from the beginning.

The comment regarding dietary assessment is not answered by "requesting that participants maintain normal dietary habits", but may not be able to be incorporated since the study has already begun.

Several times the authors mention the primary outcome being multiple measures. In fact, the primary outcome is cardiorespiratory fitness and all other outcomes are pre-specified secondary outcomes.

Minor:

Line 525: "more time-pressures" than whom?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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