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Peer Review Report for "Effects of Sitting Light Volleyball Intervention on Physical Fitness Among Hong Kong Students with Physical Disabilities: A Pilot Quasi-Experimental Study"

Author(s): Ming Yu Claudia Wong, Ka Man Leung

Review Timeline:

Submit Date:	19 Sep 2019
Revised Date:	13 Jan 2020
Accepted Date:	19 Jan 2020

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0)

15 Nov 2019

Dear AE,
General Comment:
I would like to thank the authors for submitting their manuscript titled “Effects of Sitting Light Volleyball intervention on Physical Fitness among Hong Kong Student with Physical Disability: A Pilot Quasi-Experimental Study”. They have sought to evaluate the effect of sitting light volleyball in improving physical fitness among students with physical disabilities in Hong Kong. The authors have included 18 participants from 2 special education schools in a sitting light volleyball intervention program. They showed this program was able to provide the enhancement of muscles endurance and flexibility of the students with physical disabilities. The topic of study is interesting but sample size is low.
Major Comments:
What is difference between this report and other report of authors (in reference 23)?
Introduction:
1- Introduction is too long. The introduction can be improved if it follows the order of known>unknown>question/aim, there is no need for literature review in the introduction, these parts should be moved to discussion.

2- All abbreviation should be

Methods:

3- Authors should explain how did they select 2 special education schools from seven special education schools?

4- The education program for each session should be explained in more detail.

5- Please explain the ethical considerations and provide details on the written consents.

6- In the table 1, the last row should be omitted. It could be added in the text.

Discussion:

7- Discussion part should be restructured:

a. Repeat the Aim of the study

b. Repeat research questions

c. Short summary of findings (2 to 3 sentences)

d. Discuss the findings

e. Limitation (Limitation of the study is missing)

Minor comments:

1- Consider complete word initially, later abbreviation both in the text such as PA, LVB and HKASR.

2- There are several typographical error. HKASR and HKSAR wich one is correct?

Thanks.

REFEREE: Associate Editor | **Revision** (0) 15 Nov 2019

Dear EIC,

The manuscript was reviewed by our reviewers. The reviewers have raised concerns regarding the manuscript, and therefore, the paper is not acceptable for publication in this format. However since the reviewers do find some merit in the paper, I would be willing to reconsider if the authors wish to undertake major revisions and re-submit, addressing the referees' concerns.

- Note that resubmitting the manuscript does not guarantee acceptance, and that re-submission will be subject to a re-review before a decision is rendered.

Thanks.

REFEREE: EIC | **Revision** (0) 15 Nov 2019

Dear Author,

Thank you for submitting your manuscript to Asian J Sports Med. Your manuscript has now been reviewed by two reviewers and an Associate Editor. I now have the reports of the Referees, which suggest that your manuscript is not suitable for publication following a number of revisions. I attach some of our reviewer/ Section Editor comments and hope that you will consider our Journal again for the publication of any of your future studies.

Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Response to reviewers of Effects of Sitting Light Volleyball intervention on Physical Fitness among Hong Kong Student with Physical Disabilities: A Pilot Quasi-Experimental Study

We would like to thank the reviewers for their deliberate reviews for the research article. The raised considerable concerns are very helpful for improving the article. We agree with almost all their comments that we have revised the article and responded to the comments accordingly.

The detail respond to each of the reviewers' comments will be stated below. We clearly stated the revised parts with the particular paragraph shown, as well as indicating the page for referring to the paper; or if we have slightly countered with some of the points, we stated the reason with supporting literatures. We hope that the reviewers will find our responses persuasive and cogent, and we are willing to accept further suggestions that the reviewers may have.

In the following, each responses are targeting against each reviewers' comments, the comments are in italics with responses inserted after it.

Response to comments

Reviewer 1:

1. Any evidence for the claim (in the abstract)?

In the abstract, Pg. 1 of the article, *"Hong Kong students with physical disabilities were being seen as physically inactive compared with typically developed people or even people with other disabilities, such as visual impairment or intellectual disabilities (1)."*

The in-text citation is added, with the reference from, The Home Affairs Bureau, SAR Government of Hong Kong. A Consultancy Study on Sport for People with Disabilities in Hong Kong. 2016;Retrieved from: https://www.legco.gov.hk/yr16-17/english/panels/ha/papers/ha20161111cb2-97-5-e.pdf

2. Demographic information such as age…should be reported (in the abstract).

In the abstract, Pg. 1 of the article, *"Nineteen participants, 8 males and 11 females, with the age of 18.5 on average (SD = 3.24), participated in the study."* is added into the text.

3. Report p-value for obtained results (in the abstract).

In the abstract, Pg. 1 of the article, *"The non-parametric sign test showed significant median differences on dumbbell press test and flexibility test of the right shoulder before and after the intervention, with Z = 2.94, p=0.003; Z = 2.20, p=0.028 respectively."* is added into the text.

4. State the necessity of research more vividly (in the background).

In the revised article, the introduction is modified into a more clear structure and deliberately stated the emerging prevalence of inadequate physical activity and low physical fitness, supported by previous research outcomes as well as the survey results from the Hong Kong government. Therefore, it raised the essentiality to develop an intervention programme, which aimed at providing more physical activity opportunities to people with physical disabilities through Sitting Light Volleyball.

5. Better to use different sentence. The sentence has been used repeatedly in previous ones (in Page 2).

The respective sentence was amended into a more clear structure, shown as follow, *"Researchers found out that children with physical disabilities spent most of their time, either at school or at home, and only tend to be more engaged in walking during free time (14); thus being seen as physically inactive (2,3)."*

6. *"While, it is widely acknowledged that, schools, are considered as a most influencing setting for students for health-promoting and educating."* - Netter not use common sentences that aren't academic

The above sentence is being paraphrased into, *"Schools are considered as an essential setting for students' health-promoting and educating."*

7. Kind of sampling should be clear.

The sampling method has been stated in Pg. 4 of the article, *"There were only a total of seven special education schools for children with physical disabilities in Hong Kong, and due to the tight teaching schedules of students in these schools; the convenient sample method was adopted. Eventually, only two of the schools accepted the invitation and agreed to participate in our study."*

8. Didn't you consider body composition as inclusion criteria?

Although we agree that body composition is considered as one of the most important elements within fitness measurement, however, considering that the ultimate aim of the current research is not only to enhance the targets' physical fitness, but as well as providing them an opportunity to participate in well-organized physical activity and to raise their interest towards doing exercises. Hence, we may not consider involving body composition as the inclusion criteria.

9. Put reference for exercise protocol.

The respective reference regarding the common content of a physical activity intervention protocol has been added into Pg. 4 of the article. While, an additional appendix (Appendix A) stated with the theme of each intervention section has also included.

10. Reference (of the Fitness Measurement Test)

To state it clear, an in-text citation is added in Section 3.2.2, and the Fitness Measurement Test was adopting the Brockport Physical Fitness Test (BPFT) by Winnick JP & Short FX (2004).

11. Extra explanation should be deleted. Better to point out statistical method.

It can be understood that all reviewers are quite familiar with research methods, therefore, extensive explanation of the statistical method, for instance, the purpose and definition of the last observation carried forward (LOCF) method, has been deleted.

12. The weight has been increased after intervention? The issue should be discussed in discussion.

We agree that it is necessary to comprehensively explain the phenomenon of the increased weight after intervention. Therefore, other than the original stated argument on the short duration of the intervention, we reviewed that there were still inconsistency outcomes in the literature regarding the effectiveness of either aerobic exercise or resistance training in reducing and maintaining body weight. Additionally, sleeping quality, calorie and energy intake after exercise should also be the influencing factors that affect the significance of weight reduction after physical activity. (Indicated in Pg. 8)

13. The consequences of exercise on body fat and muscle mass should be more fully described.

In the second paragraph of the discussion, we have additionally stated that exercise groups with resistance exercises showed a greater change in lean body mass compared to aerobic exercise; while weight compensation for aerobic exercise training is also another possible factor affecting the effectiveness of weight loss, thus would affect participants' energy and fat intake after aerobic exercise training. Hence, as lean body mass is also called as fat-free mass, the Sitting Light Volleyball intervention conducted in this research may see as having less effect on other index, including muscle mass.

14. Distinguish (the flexibility results) with other studies.

In the forth paragraph of the discussion, we have stated the outcomes of other similar research regarding the flexibility improvement of physical disabilities after exercise intervention. Most of the other research regarding flexibility were mainly focused on elderlies, and the research intervention was flexibility-performance focus. Therefore, despite both elderly and physical disabilities have similar physical fitness limitations, the current research evidenced that aerobic exercises could improve the flexibility of physical disabilities.

15. "*Hence, other than measuring physical change objectively, subjective measures on the effect of psychological health and quality of life can also be involved in future research.*" - How have you concluded? Based on research literature, it seems clear.

Having considered that the positive psychological effect of physical activity and physical change, the conclusion and future implication has been re-stated as follows,

"…, other than measuring the change in physical fitness objectively, an extensive intervention programme with follow-up testing can be done to measure the effect of SLVB in motivating physical disability students to be more physically active, then to increase their physical activity level as well as their psychological health." (Pg. 9)

And, additionally stated the ultimate goal of the current intervention, that is the statistical support for the effect of SLVB, and prove to be worthwhile to have SLVB to be promoted to all the special education schools in Hong Kong.

Reviewer 2:

1. What is difference between this report and other report of authors (in reference 23)?
   a) *Leung KM, Chung PK, Wong MY. Promoting light volleyball among people with physical disabilities in Hong Kong: International Society of Behavioral Nutrition and Physical Activity; 2019 June 4th-7th; Prague, Czech Republic.*
   b) *Leung KM, Chung PK, Chu W. Effects of a sitting light volleyball intervention program on physical and psychosocial attributes of people with physical disabilities in Hong Kong. The Journal of Strength and Conditioning Research (submitted).2019*

   It is indicated that Leung, being mentioned in the article, is being the person who develop the Sitting Light Volleyball intervention programme. While, the differences between the above two articles are they have different third author. Additionally, the two research were mainly targeting adult with physical disabilities, while this research is targeting students with physical disabilities, studying in special education school in spite of they are aged over 18.

2. Introduction is too long. The introduction can be improved if it follows the order of known>unknown>question/aim, there is no need for literature review in the introduction, these parts should be moved to discussion.

In the revised article, the introduction is modified into the suggested structure. First, it stated the knowing of the low physical activity and fitness level of the students with physical disabilities. Second, it indicated the statement of problem that there were a decrease in sports courses' variety and availability offered for physical disabilities students in particular. Therefore, finally, stating the need of having an organized physical activity intervention in order to enhance the targets' physical activity and fitness, while the newly developed sitting light volleyball is applied and tested.

3. Authors should explain how did they select 2 special education schools from seven special education schools?

This information was added towards the text (in Pg. 4), *"There were only a total of seven special education schools for children with physical disabilities in Hong Kong, and due to the tight teaching schedules of students in these schools; the convenient sample method was adopted. Eventually, only two of the schools accepted the invitation and agreed to participate in our study."*

4. The education program for each session should be explained in more detail.

An additional appendix (Appendix A) stated with the theme of each intervention section has included at the end of the text.

5. Please explain the ethical considerations and provide details on the written consents.

The statement regarding ethical concerns and inclusion of written consents were stated in the text as follow, *"The consent form was given to their parents in advance for endorsement. The parents were told about the process of intervention and the purpose of the current study, as well as the confidentiality of the data collected. The parents and students were also reminded that they would be allowed to withdraw from the research at any time without any penalty and without loss of benefits."*

6. Discussion part should be restructured

First, regarding reviewer's comment on the literature should be stated in the discussion part instead, the following reviews are moved to the discussion part, "*In fact, children with non-motor disabilities in Hong Kong, like intellectual disability and visual impairment, were given more opportunities to engage in sports activity compared with those with physical (or called as motor) disabilities. Yet, this is due to the facilities available within schools, the accessibility towards public venues from schools, manpower as well as the type of disability of the students, would hinder physical disabilities students in engaging in organized physical activities.*"

Secondly, the discussion part is restructured according to the reviewer's suggestion.

a) Restated the aim of the intervention programme and summarized the study results
b) Discussed the findings in a parallel structure with that in the results part: Body composition, muscle endurance and strength, as well as flexibility
c) Raised possible future implication

7. Limitation (Limitation of the study is missing)

The limitation section of the study was originally combined with the discussion part, while, in the revised version, the limitation of study was separated out into a new paragraph at the end of the research article (in section 5.1)

References

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Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Associate Editor | **Revision** (1) 19 Jan 2020

Dear EIC,
The authors have addressed the concerns raised by the reviewers and have acceptably revised the manuscript.
Thanks.

REFEREE: EIC | **Revision** (1) 19 Jan 2020

dear Author,
The second round of peer review of your manuscript has been completed, and I am pleased to inform you that your manuscript has now been accepted for publication in our journal.
Thanks.