Reviewer’s report

Title: The 2016 HIGh Heels Health effects and psychosexual benefITS (HIGH HABITS) study: systematic review of reviews and additional primary studies

Version: 0 Date: 30 Mar 2017

Reviewer: Cylie Williams

Reviewer’s report:

Thank you for the opportunity to review this article and comment the authors for their continual work investigating the impact of high heel footwear.

Overall comments;

I would encourage the authors to consider the following changes that promote a negative instead of neutral connotation when discussing the impact of footwear. An example of this is:

Previous studies and reviews have provided evidence that high heels are detrimental to health.....etc

Yet in other parts, authors have conceded that there is an association between footwear and health. Therefore association does not equal causation. There is a continual flavour of this throughout the article and the authors should take care to ensure this is not the case. I would also defer to the journal preference in removal of first person language. It is not my preference to see language such as "we" etc in an article but if this is something the journal allows then that should be conveyed through the editor.

Introduction:

Why have only articles reported as having a negative impact on musculoskeletal health been included within the review, were articles with a positive impact? Why not just include articles with an impact, again this goes back to the flavour of negativity.

Methods:

Risk of bias - there are many tools that allow a generic risk of bias or assessment of quality of the article- I would urge the authors to consider this to allow the reader to understand the quality of the evidence. It is not acceptable to miss this step. This is especially relevant when the authors describe "good evidence" in support of the findings
Results:

I found the results section particularly difficult to follow and suggest a restructure of findings. As no meta-analysis is possible, the authors should consider presenting this against each of the aims with clear linking of the result to the tables. Removal of additional primary studies section and including this all into a succinct summary of findings against each part of the aim is needed. A suggestion would instead be of results focusing on each of the outcomes i.e.: Biomechanics factors, MSK factors, etc and the articles supporting each of these impacts. I found continual referral to different parts of tables distracting to the flow of the results and would encourage the authors to consider incorporating this into the result section to minimise this.

The authors discuss in the abstract and aim they wish to synthesis injury in first party injury but exclude reference 46 based on second party injury. This article is primarily first party injury related therefore is it in or out?

Page 10 Ln 46 - Russel found inclusive results...should this be conclusive?

Discussion:

Again, the authors must be reminded that association does not lead to causation. Pg 12 Ln 24-26 - OA and HAV has additional risk factors including genetic and therefore this statement should be association and not so definitive. I also remain unconvinced that the literature supports the subsequent statement of an serious first person injury being related to high heel use given the literature within the review. "Serious" generally is a term relating to risk of death and the article relating to first injury data primarily describes fractures, sprains and strains. The authors almost state this in the second part of the paragraph and therefore discount their initial strong condemnation of footwear. This paragraph is not cohesive.

Page 13 Ln 51 - First sentence - what about High heels is a challenging topic?

There also continues to be a "flavour" of how to get women to stop wearing high heels through the discussion. In spite of feminist theories introduced into this discussion, where does one draw the line at preaching on choice, in the presence of only moderate evidence supporting detrimental choices but strong impact on psychosocial health benefits. Which is better, I'm not sure one is better than the other. The authors should strongly consider reducing much of the discussion while remaining factual. For e.g.: Inclusion of reference 34 - whilst a systematic review, this article was built on many assumptions and therefore not conclusive that high heel use directly is dangerous to children's posture.

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

Yes

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

Unable to assess

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

No

**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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