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: 22 Mar 2017

Reviewer: Neil Cronin

Reviewer’s report:

This paper addresses a popular topic, and adds some interesting information to the debate on high heels and their effects on the female body. In particular, the authors' discussion of high heels in relation to children, as well as the compulsory nature of high heel wear for women in some professions, offer important insights and may serve to raise awareness among these vulnerable groups. I have relatively few suggestions for improvement, which are listed below.

"Public health is closely linked to politics and some political features, for example Left-of-centre rather than Right-of-centre, have been demonstrated to be more health promoting [28]."

It is not clear to me how this sentence logically follows from the previous, which refers to the potential of high heels to cause physical harm. In any case, it is a little ambiguous, and does not add any concrete information to the 'story' being told.

Page 9, line 49: Should be '…is shown in…'

p10, l44 onwards: "Looking specifically at lumbar lordosis, considering literature up to 2010, Russell [33] found inclusive results, a result that has been since superseded by Cronin [21] in his findings of qualitatively consistent alterations in kinetics and kinematics from the spine to the toes".

This takes my statement a little out of context. Indeed in my review article I discussed the inconsistencies in the literature regarding lordosis, and with the above-cited statement, I certainly did not intend to imply that all studies are actually in agreement on this issue. I suggest revising.

p10, l46: Inconclusive instead of inclusive

p11, l27-32: "…whereas helping behaviours were only influenced by the confederate's heel height in male participants".

I think I understand the intended meaning here, but the authors might consider rewording for clarity. For example, the word 'confederate' is not commonly used to describe a wearer of high heels! The term 'helping behaviours' may also need some explanation.

p11, l34: Similarly, the term 'point-light task' could perhaps be clarified.
p12, l34-42: "However, there is still no clear epidemiological evidence of an association between high heel wear and OA, despite a large volume of biomechanical evidence dating back to the seminal paper in the Lancet in 1998 by Kerrigan et al".

I think the wording could be a bit more cautious here. I interpret this sentence to mean that the authors believe firmly that high heels increase the risk of OA, and that Kerrigan's paper offers strong evidence in favour of this. I would disagree with this interpretation, since Kerrigan simply showed that the moment about the knee is larger when walking in heels compared to barefoot. In their conclusion they state that "The altered forces at the knee caused by walking in high heels may predispose to degenerative changes in the joint". Whilst this may be true, their paper does not offer evidence to confirm it.

p13, last paragraph: The authors might reconsider the use of the word 'beneficial' when stating that high heels increase attractiveness in the eyes of men. I suspect some women may object to the suggestion that they wear high heels for this reason or that male attention is inherently beneficial.

The paper lacks a concrete conclusion, ending instead with a brief discussion of the paper's limitations. The authors might consider adding a short concluding statement to close the paper.

**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.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
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Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
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Not relevant to this manuscript

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