Reviewer’s report

Title: Is Anybody Doing It? An experimental study of the effect of normative messages on intention to do physical activity

Version: 3 Date: 25 March 2014

Reviewer: Sandra Coulon

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Brief Summary:
The question asked here, how do social norm messages influence intentions and related perceptions of PA in young adults, is very interesting and well-defined in the manuscript. Experimental findings have the potential to meaningfully impact public health though some points of revision must be considered.

Major Compulsory Revisions
1. Paragraph 4 seems to be the part of the introduction that presents the importance of and empirical foundation of the work (it starts with “Evidence on the impact”), however it is too sparse to properly do that, as is the introduction in general. The reader needs to be better walked through the existing empirical evidence for relations between descriptive norms and PA. As it is, there is only one or two sentences on this and they are not very informative (e.g. they do not even mention directionality of the relations). The lack of background information on this topic also does not make clear how this work builds on existing literature and theory. Has a study like this ever been done before? If so, it/they should be reviewed, with information provided on how this work fits in. If not, that should also be stated. Because the discussion includes a statement about “previous studies testing a normative message,” I assume there must be some relevant work in this area that can be referenced and more thoroughly reviewed to give better context for the work. Generally, information contained in the introduction is confusing as a context is not provided and more information (definitions, transition sentences) is needed to increase clarity (e.g. page 3, “...more effective than traditional appeals for hotel guests to reuse towels”, e.g. need to define “the so-called provincial effect” better, introduce how it would apply to PA). The dearth of empirical review combined with the lack of clarity due to sparse information, typos, undefined terminologies, lack of transition from one topic to the next make the manuscript a difficult read, despite the relatively straight-forward aims and clean study design.

2. Given that unexpected findings were stated, and that differences across countries were found, it makes sense to use other measures existing within the larger study to examine whether findings/differences are partly explained by different base rates of PA. For example, a measure of past PA behaviors was part of the parent trial (IPAQ) and could be used to assess the potential impact of baseline PA behaviors across countries on group differences.
3. The statements in the Methods about Bulgaria, Croatia, and Romania being selected as they are “the least convinced of the effectiveness of physical activity” are relevant to the public health significance of this work and should be included in the introduction rather than the methods. Additionally, it is not sufficient to simply make a sweeping statement about the culture of a few countries without 1) further explaining it, and 2) providing empirical support/references for those claims.

Minor Essential Revisions

4. Statements in the methods section that because it was not feasible to assess actual PA, intentions served as a proxy given the “presumed link between intention and behavior holds up to empirical analysis.” This seems an overstatement of the conclusions that can be drawn from measuring intentions, as it seems invalid to consider intentions to be a representation/proxy of actual PA. While the “link” may be there, they are not mutually exclusive and intentions often do not amount to action, especially when it comes to weight management and related health behaviors. It would be greatly interesting to have a measure of actual PA included in the study, and to assess whether normative messages impact actual PA, and also how that matches up with or does not match up with intentions. Without such a comparison it is difficult to gage the size of this effect and its related clinical significance, and in this case a more thorough discussion of future directions should be present in the Discussion.

5. The context of the normative messages given was unique in that it was delivered online to the participants personally, and engaged participants actively. This is likely in contrast with public health campaigns that often deliver messages through mass media (e.g., television) and which may be received passively, rather than engaging participants actively. Some discussion of how the medium of the messages may have played a role in intention-responding would be interesting.

6. Use of the phrase “intention to behave” when likely “intention to increase PA” is really what is being referred to is confusing in the Methods section. Modify the text so that PA is referenced when not referring specifically to the Intention to Behave construct.

7. Why might Croatian women have been more likely to drop out? Are there any demographic or health-related differences in that subgroup compared to the others? Some conjecture on this would be useful given that their retention rate was so dramatically lower than the other groups’.

8. It’s great that images from the experiment were included and helps to convey how simple such an intervention related to intentions would be. The images include “@1” placeholders for age and country descriptors. These should be replaced with example descriptors or “[age range]” and “[Croatia]”, for example.

9. Figure 4, a bar graph would be more appropriate since time, which would typically be represented on the x-axis in a line graph like this, is not a factor.

10. Given limitations related to generalizability, and the need to replicate this work, the first sentence in the Conclusion section should be more modest, e.g.
should say “can increase.”

Discretionary Revisions

1. A minor preference, I’m not sure that the word “perplexing” is best to describe the unexpected results regarding normative negative messages. Perhaps “unexpected,” given that you are able to develop some theory-based potential reasons and future directions for this finding, shedding some light on the situation.

2. Mention of injunctive norms, while not as applicable to the design of the study as descriptive norms, may be relevant in the discussion. Consider either adding discussion of this, or taking it out of the introduction entirely if it will not be referred to except for that one time.

3. In conjecturing why results indicated an increase in PA for the group that received messages that regular PA was not normative, the potential priming effect noted could be related also to engagement in a quick self-monitoring mental task in the moment, and a subsequent increase in intentions for PA. Thus it is possible that simply the mention of PA, independent of norm valence, prompted self-monitoring of current PA behaviors and a subsequent increased intentions to engage in PA. Self-monitoring is an exercise highly relevant to and effective for health behavior change and weight management, and would be clinically useful to mention. Additionally, it is possible that they perceived the non-active majority in the context of a downward social comparison (e.g. “well, if I can stay/become more active then all other things remaining equal, at least I’ll be doing better than most people”), and that this prompted an increase in intention for PA.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.