Author's response to reviews

Title: Psychophysiological effects of a web-based stress management system. A prospective, randomized controlled intervention study of IT and media workers.

Authors:

Dan Hasson (dan.hasson@pubcare.uu.se)
Ulla Maria Anderberg (ullamaria.anderberg@pubcare.uu.se)
Tores Theorell (tores.theorell@ipm.ki.se)
Bengt B Arnetz (bengt.arnetz@pubcare.uu.se)

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Author's response to reviews: see over
Dear BioMed Central Editorial Team,

We are very grateful for your response and all valuable and kind comment from Referees. The manuscript has undergone major and minor modification accordingly with their suggestions. All the comment/changes relating to reviewer comment are presented below.

Reviewer comment and actions

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Referee #1 Holger Ursin
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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached).

1. The discussion is far too long, and requires substantial editing and language corrections. The discussion of methodological considerations is edited with a listing of arguments increasing from “firstly” up to “seventhly”, which at best is an unusual way of doing it. It did not help me, and the section is too long anyway. The conclusion refers to a “following” study, and acknowledgement is not written in the standard way. The abstract also requires language editing.

Answer: We have perused and edited the language and several linguistic and other errors have been corrected throughout the manuscript and abstract accordingly with the suggestions of the referees. “Firstly up to seventhly” has been omitted from the discussion section. The discussion section has also been shortened. In the Conclusion, the word “following” has been changed to “current”.

Discretionary Revisions (which the author can choose to ignore).

1. You assume that the markers are health related, and that their findings may be helpful in counteracting stress and health problems. You claim that stress related disorders are “major public health issues” and are expected to become increasingly common. You refer to WHO reports on global burdens in health. These deal mainly with depression and anxiety. These statements lack somewhat in precision.

Answer: These formulations have been adjusted. Furthermore, the WHO reports on the Global burden of disease predicts the increase in mental ill health, including stress-related disorders such as depression and anxiety.

2. In the introduction as well as in the discussion you refer to “stressful periods” in the Swedish society and to the election campaign, later also to seasonal variations. As far as I can read the method section, all experiments were done within the same period and with the same follow-up period. Since this is a randomized trial, some of this variance is controlled for. The conclusions become difficult and speculative when the changes are found in the control group. There is also no discussion of the possible variance in sampling time of the day. For many of these markers there is a considerable variance during the early morning hours.

Answer: The reviewer points to a potential problem, which we have now addressed under the methodological considerations in the Discussion section. We have also pointed to this aspect in the Methods section, under the subheading “Blood samples”, second sentence of the second paragraph.

3. I had a hard time following the arguments from the logistic regression studies. The odds ratios appear impressive at first, but then you go on to state that the predictions “remain significant even after adjustment for age, gender, annual income, education, marital status, etc”. There is also a referral to various “models” in the abstract, which is hard to interpret. Are the odds ratios reported
the predictions that “remain” and what are the various models referred to in the abstract?

Answer: We agree that the statistical explanation was difficult to follow when results were only presented in the text. We have therefore introduced a table describing odds ratios. We think that these tables are going to explain the statistical findings more efficiently.

4. Some of the discussions of the biological markers, perhaps particularly for “NPY”, refer to findings from pharmacological doses, which may not be relevant for variance within the physiological range.

Answer: This remark prompted us to add a sentence addressing this matter in the discussion of NPY (last sentence of the second paragraph under the subheading “Biological markers” in the discussion section).

5. It is surprising that in the discussion the sleep findings are suddenly the most important findings.

Answer: We agree. The formulation has been changed to: “…A striking finding…”.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct).

1. The authors speak about a follow period of six months, but this is not correct. In the present work they present a period of intervention of six months and they do not use follow up. The authors only say that they are collecting and analysing data from a follow-up period but these data are not presented in the manuscript.

Answer: We agree that this could be confusing and have therefore changed this formulation in both text and tables throughout the manuscript.

2. I don’t understand why in the statistical analysis they use a two-tailed test. In fact they have a prediction and could use a one-tailed test.

Answer: No, we thought we should be cautious and not use one-tailed tests. This decision is further amplified by the fact that we have done many statistical tests.

3. The authors mentioned in page 21 a possible problem of mass-significance because of a multitude of items and physiological markers were used. They could use MANOVAS grouping in a coherent way some variables in order to know the global impact of the intervention.

Answer: The multiple logistic regressions are in fact doing a similar thing. We think that the introduction of the tables based upon multiple logistic regressions is a step in the proposed direction.

4. Would be interesting if the authors would provide the Internet site address in order to check the appearance and the usability of the site.

Answer: This information has been added in the end of the method section after the statement concerning ethical approval of the study.

5. A more important point is to know if the authors controlled the use of some psychotropic drugs by the participants. They say that the study was conducted during a period of stress. It could be possible that the participants took some pills in order to overcome this difficult situation. The
authors should inform about this question, and if they don't have data about this point to underline it in the discussion section.

**Answer:** We agree with this statement and have addressed it in the Methods section, last sentence in the second paragraph from the end under the subheading “Participants and study groups”.

We now hope that you will find the revised manuscript acceptable for publication.

Sincerely yours

Dan Hasson

Phone +46 18 611 35 70, Cellular +46 70 728 42 98
Fax +46 18 50 64 04

Uppsala University
Department of Public Health and Caring Sciences
Section for Social Medicine
Uppsala Science Park
SE-751 85 Uppsala
SWEDEN

E-mail: dan.hasson@pubcare.uu.se