Author's response to reviews

Title: The prevalence of work-related stress, and its association with self-perceived health and sick-leave, in a cohort of employed Swedish women.

Authors:

Kristina Holmgren (kristina.holmgren@neuro.gu.se)
Synneve Dahlin Ivanoff (synneve.dahlin-ivanoff@neuro.gu.se)
Cecilia Bjorkelund (cecilia.bjorkelund@allmed.gu.se)
Gunnel Hensing (gunnel.hensing@socmed.gu.se)

Version: 4 Date: 8 January 2009

Author's response to reviews: see over
Dear Erik Alexandersson,

Thank you very much for the referee responses on our comments on the paper “The prevalence of work-related stress, and its association with self-perceived health and sick-leave, in a cohort of employed Swedish women”. Reviewer 2 had some additional questions and comments. We find them all important, and below you will find the outline of the revisions made, along with some arguments concerning parts of the referee’s comments.

Our comments on review 2

1. In order to clarify this step in the procedure we have reformulated the following in the manuscript: Page 5: “In this study, from October 2004 to April 2005, a random sample of 38-year-old and 50-year-old women registered for census purposes in Gothenburg was identified and invited to participate in a free health examination. Additionally, 85 participants aged 38 years in the 1992-93 cohort, and who in 2004-05 were 50 years old, were invited.”

2. That’s correct. The reliability was tested in a test-retest study (Holmgren et al Disabil Rehab 2008). In order to clarify this, the following has been added in the manuscript: Page 6 “The reliability of the questionnaire was tested in a test-retest study by a non-parametric statistical method for evaluation of paired data.”

3. Internal consistency reliability and the grouping of the items was evaluated and based on the empirical findings from the qualitative study (Holmgren et al Disabil Rehab 2004) and by performing a pilot group in the development of the Work Stress Questionnaire (the procedure is described and discussed in Holmgren et al Disabil Rehab 2008 and in the thesis by Holmgren, K. Work-related stress in women, 2008.). In order to use Cronbach’s alpha, data has to be parametric (Bobko, P. Correlation and regression: Principles and applications for industrial/organizational psychology and management London Sage Publications Inc, 2001). Since we have non-parametric data in this paper using this method of statistics was never an option. As mentioned earlier, in order to develop the WSQ further studies are required, and are planned.

4. Owing to the fact that both exposure and out-come variables are ordered categorical data (so called ordinal data), the median value is used in this paper. Often in these types of rating scales each response level has a number. Despite the use of numbers the responses only indicate an ordered structure or a label. To add or subtract ordinal data (rating scales) is not appropriate; neither is using other parametrical statistical methods (Svensson J Rehab Med 2001). To clarify the meaning of “median label”, these words have been replaced with “median response category” on Page 7. If needed
we are of course willing to expand more on these issues in the paper. We have refrained from doing so in order to keep the manuscript within the word limits.

5. The cut-off point at the upper quartile was not a random choice, but a choice based on the distribution of the empirical data. In the analysis stage we performed a frequency distribution of the data and we followed the distribution when deciding how to dichotomise. To find enough exposure differences without having to compare the extremes, we chose to dichotomise at the upper quartile.

6. It may be true that the odds ratios are an overestimation. However, it may also be that the odds ratios are an underestimation. It is not uncommon that persons exposed to stress, at least in the beginning of the process, often disregard their symptoms and reduce the importance of the sources of stress. We have added a brief comment on this in the methodological consideration section on Page 17: “Studies based on self report measures can be influenced by several factors, such as recall bias, social desirable answers and exposure suspicion bias. It is therefore essential to interpret the results with caution. In this particular study we do not think that these possible sources of bias only follow one direction, i.e. towards overestimation. From clinical experience it is not uncommon that individuals exposed to severe stress underestimate the sources of stress in their lives.” As pointed out, the study is cross-sectional and we can not be sure what the cause is and what the effect is, so further research is required to disentangle this. This limitation is mentioned in the methodological considerations section.

With best regards,
Kristina Holmgren

Kristina Holmgren, PhD
Institute of Neuroscience and Physiology /Occupational Therapy
University of Gothenburg
Box 453
405 30 Gothenburg
Tel +4631-786 68 63
Email kristina.holmgren@neuro.gu.se