Author's response to reviews

Title: Coping and back problems: Part 1. Analysis of multiple data sources on an entire cross-sectional cohort of Swedish military recruits.

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Author’s response to reviews: see over
Dear Editor and Reviewers,

A third-generation manuscript, which we believe has gained in clarity, is hereby submitted.

Our comments to the three reviewers are:

**Alex Burdorf**

“It is of interest to learn that 3 reviewers make exactly the same remark with regard to the definition of the independent factors in this cross-sectional design. I am still inclined to ask for NOT using the word predictor, since it has a specific definition (see eg. Last dictionary of Epidemiology). I have no problems that in the discussion the question is raised whether the determinants/factors are also predictors etc, but one cannot simply introduce an own terminology.”

Reply: It is correct that all three reviewers were very keen on the use of vocabulary. Words that could indicate risk and cause should not be used in a cross-sectional study. We are of course in total agreement and have previously made the necessary amendments. In response to the reviewer’s additional comment, we have decided to exchange also the term “potential predictor variable” for the classical term “independent variable”, which is used throughout the text. We have not highlighted these changes, but we assure you that we have used the search function to make sure no “potential predictor variable” are used erroneously.

**Eugene J Carragee**

“The manuscript reads more clearly now but still suffers from an assumption that everyone is an epidemiologist. The authors take for granted that the distinction between certain epidemiological and statistical terms and their implications are well understood by the BMC Muscular disorders readers (for instance the difference between statistical interactions and associations of the actual meaning of the area under an ROC). I would submit that referring a general readership to epidemiological textbooks is unhelpful, misreads to audience and impairs the impact of the manuscript. I believe the authors can do better but have chosen not to. I leave it to thee editors to determine if any further work should be done to make the manuscript more accessible. Since these issues were raised in the first round by reviewers with
speciality interest in this area, I think the general audience will be even more confused.”

Reply: We certainly agree that it is important that readers can understand the meaning of the text in a scientific article. On the other hand, if each scientific author has to explain the various underlying concepts and technicalities in each publication, texts would be quite unwieldy. We have tried to strike a middle way. The area under the ROC has been briefly explained. Interactions were already explained in the text, so the word “however” has been added in the next paragraph on associations, to highlight that these are different from interactions. Hopefully, these amendments should solve these problems.

Michael Höfler

“The authors have done a very good job in answering to my concerns and changing the manuscript accordingly. The paper can be published in the present version.”

Reply: We thank the reviewer for his help in achieving this.

Kind regards
Charlotte Leboeuf-Yde
(on behalf of the authors)