Author’s response to reviews

Title: Social support attenuates the link between torture exposure and post-traumatic stress disorder among male and female Syrian refugees in Sweden

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Author’s response to reviews:

Dear Editor of BMC International Health and Human Rights,

Thank you for the opportunity to submit a revised version of our manuscript “Social support attenuates the link between torture exposure and post-traumatic stress disorder among male and female Syrian refugees in Sweden” (IHHR-D-18-00166) for possible publication.

Although we are grateful for the comments on the manuscript; we would like to highlight that the recent arisen issues and recommendations (i.e. use of weighted data in mixture models and estimates of associations) still remains debated in the statistics and scientific communities [1]. More specifically, to our knowledge there is not yet a unified consensus on the issue of weighting in the main analysis strategy and the sampling scheme. We have provided the rationale for the reviewer. We neither aspire nor are able to settle this statistical debate within the framework of the present study, but we are able to demonstrate that incorporating the suggested approach does not alter or inform the results and inferences of our study in any substantive way. We have provided an extensive and detailed response and rationale for the adopted strategy to the reviewer and have made revisions in the manuscript that reflect this.

Considering the real-life application and human rights implications of our study, and the limitations inherent in the research among hard to reach populations, particularly refugees, we hope that you find this detailed level of technical discussion sufficient.

We resubmit the revised manuscript in two versions; one ‘clean’ and one with tracked changes. Our response to the reviewer’s comments, are included at the bottom of this letter.
All co-authors have read and approved the revised version of the manuscript.

Thank you for considering our manuscript for possible publication. We are looking forward to hearing from you again.

On the behalf of the authors,

Maria Gottvall

Reviewers comment:

I think the authors did well to address my comments, but I’ll have preferred they had a way of dealing with the non-response than merely identifying it as a limitation. It is my opinion that the non-response is significant enough to introduce bias.

This is often dealt with by making statistical adjustments using weighting strategies or by modeling the extent of bias as a result of the non-response. Do they have weights in the data to deal with this?

Why wasn’t this modeled? Merely acknowledging this as a limitation does not deal with the problem.

Our response:

Thank you for your additional comment regarding the response rate. We have provided the rationales for using unweighted data for the analysis and have made revisions in the manuscript that reflect this. Our rationales for using unweighted data for the analyses is listed below:

1. The differences in the distributions between the respondents’ data set and the weighted data set in regard to available data for weighting were very small to neglectable. For gender, the difference amounted to less than 1%, for age groups in overall average <4%, and for the largest age group (30 to 38 years) < 1% (please see Tinghög et al [4] page 4).

2. Our study did not aim to estimate a finite population’s characteristics such as prevalences, means, and proportions. Although we agree that estimating population characteristics would have greatly benefited from weighting, variance-based estimates such as those used in the
present analysis may even risk to be further biased by weighting, especially with less informative auxiliary data which is applicable to this study. Given that there are still debates regarding the use of weighted data in estimating associations and variable modeling rather than estimating finite population characteristics [1], to cite Lavallée & Beaumont [5] “…If the sampling design does not bring any more information in trying to estimate B, then their claim of not using the weights is true. We then say that the sampling design is not informative”. Consequently, we relied on our sensitivity analyses to select the appropriate strategy.

3. The results of our sensitivity analyses, first by including the exposure and mediating and moderation variables as well as the outcomes in logistic regression models with both weighted and unweighted data sets revealed that the point estimates of the associations and significance of these were not at all altered by weighting the data. The weighted data only produced slightly different confidence intervals for the Rs (ranging from <0.01 to 0.5). These altered CIs were however encompassed within the unweighted reported CIs. Similarly, running the main analyses with the available weighted data set produced overall non-altered results due to uninformative sampling design. In our revised version of the manuscript, we have added the sensitivity analysis to the Methods, Results as well as briefly discussed it in the Discussion section.

4. A simple random sampling was used in our study. To cite Duchesne et al [3] “survey weights can presumably be added to the methods to handle data obtained with sampling schemes other than simple random sampling” (italic by us), the issue is further supported by the proponents of weighting such as Lavallée & Beaumont [5]. Our consulting with the Methodology division of Statistics Sweden corroborated that weighting the data obtained through this sampling scheme would not alter the analyses, and risk introducing bias in variance estimates.

5. The main auxiliary data which were available for weighting were in fact included as the potential moderator and control variables in the main analyses.

6. Given the above, and considering the ongoing discussions within the research communities on the use of weighted data on association based analyses, and the impact of non-response on estimates of associations [1,6,2,7] and, to our knowledge, a lack of definitive and unified consensus in regard to weighting in mixture models, and most importantly our sensitivity analyses, we conclude that using the available data would provide adequately reliable SEM results. We then reviewed the most recent 20 publications in BMC Medical Research Methodology and Public health [8-27] where Mixture models have been used as main analyses -
none of these publications appeared to be based on weighted data sets indicating that the approach is not fully established in all fields. We have added two references [6,2] in the manuscript (page 19) to clarify the issue of non-response further in the manuscript and hope that you will find this acceptable.

References


