Author’s response to reviews

Title: The trajectory of symptom burden in exposed and unexposed survivors of a major avalanche disaster: A 30 year long-term follow-up study

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A point-by-point response letter to BMC Psychiatry

We thank the reviewers for their valuable comments and appreciate their suggestions. We have answered all the comments from reviewer 2 one-by-one below, since there were no comments from the editor or reviewer 1 this time. All changes in the manuscript are written in red.

Answer to Reviewer 2:

1. Comments from Reviewer 2:

An assumption of linear mixed models is that the dependent variable is assumed to come from a normal distribution. Given the small sample size, this is unlikely. In my previous comments, I strongly suggested using non-parametric statistical tests (e.g., the Wilcoxon-Mann-Whitney instead of T-test).

Response from the authors:
We agree with the reviewer that one of the main assumption for t-test is data being normally distributed in both groups. This assumption is hard to fulfill and check with small data sets like ours. Therefore, we have accommodated the peer reviews request to conduct a non-parametric test, Wilcoxon-Mann-Whitney test. These non-parametric tests did not show any statistically significant differences between the two groups (exposed and unexposed) at T1-T4. We have included the following text in the “Statistical analyses” section, line 3-5, page 9.

“Possible crude differences between groups (exposed and unexposed) at T1-T4 were assessed using the Wilcoxon-Mann-Whitney test for continuous variables and Chi-square or Fisher’s exact test for categorical variables”.

Further, we have also included the following text in the “Results” section, line 9-10, page 10:

“However, these changes did not reach the level of statistical significance using Mann-Whitney Wilcoxon tests (all p>0.05, data not shown) (all unadjusted Ms, see Table 2)”.

Concerning linear models with continuous outcome, the assumption of normality is for the residuals not the outcome.

2. Comments from Reviewer 2:

Power analysis (even observed power or post-hoc power) was not carried out. If a statistical test has inadequate power, it may not be able to detect a difference even though a difference truly exists, thus, leading to the type II error.

Response from the authors:

We completely agree with the reviewer that a power analysis is crucial when comparing two or more groups, particularly RCT-studies. However, in our case the study was not design as a controlled trial and was partly observational. We used all the data available and it was not possible (for obvious ethical reasons) to include more individuals in any of the groups. A part of scientific reasons, we had an ethical obligation to analyze the available data.

Moreover, we have presented all our findings as point estimates with confidence intervals to indicate the level of precision we had given our limited sample.