Reviewer’s report

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

Version: 2  Date: 13 Apr 2019

Reviewer: Reviewer 2

Reviewer’s report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are major issues

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?

No - there are major issues

STATISTICS - Is the use of statistics in the manuscript appropriate?

No - there are issues with the statistics in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The author(s) have answered the recommendations set out in the second expertise. I appreciate their changes and the comments made. However, there are two issues that were not addressed properly.

REQUESTED REVISIONS:

Concerning linear models with continuous outcome, it is not clear to me if the assumptions of normality along with linearity and homogeneity of variance have been tested and fulfilled.

Concerning power analysis, as I stated, 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. Power analysis can reveal what size sample is needed to detect an effect of a given size. This is a matter of validity of the analysis and the design of study (either experimental or observational) is irrelevant. For instance, the unexposed group reported not significant (all p>0.05) lower proportions of individuals above cut-off points for almost all instruments. These results are because no true differences exist or because there is not enough power to detect existing true (even small-sized) differences? In other words, does this sample size allow enough power to detect differences of various magnitudes (from small to large)? This point is not even mentioned in the limitations.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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