Reviewer’s report

Title: After the Fort McMurray wildfire there are significant increases in mental health symptoms in Grade 7-12 students compared to controls

Version: 0 Date: 11 Jul 2018

Reviewer: Andreas Witt

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Manuscript ID BPSY-D-18-00435

Title "After the Fort McMurray wildfire there are significant increases in mental health symptoms in grade 7-12 students compared to controls"

In this manuscript the authors examine the impact of a disaster on the mental health of grade 7-12 students. The authors use two considerably large samples (N=3070 and N=2796) for their analyses. The samples have been recruited 3 years apart from each other and the Red deer sample serves as a control group. The authors find that mental health symptoms were statistically significantly elevated in the sample that was exposed to the Fort McMurray wildfire. The authors conclude that these results are consistent with prior findings and highlight the need to identify adolescents at risk and to implement short and long term mental health interventions.

Overall the manuscript is very well written and easy to follow. The sample size is considerably large (one major strength of the study) and the statistical analyses that were carried out are appropriate. However, the novelty of the findings is limited. One of the biggest issues with the manuscript is, that the trauma exposure has not been examined in the paper. To my understanding this was due to the fact that trauma exposure and symptoms have not been collected in the control sample. The authors state that "little research has compared population mental health in disaster impacted versus non-disaster impacted communities in order to determine the effects on…” (p.5, l- 36 f). However, other studies have assessed trauma exposure in disaster exposed samples (e.g. Weems & Graham, Resilience and Trajectories of Posttraumatic Stress Among Youth Exposed to Disaster. J.Child Adolesc.Psychopharmacol., 2014, 24, 1, 2-8) and by controlling for trauma exposure the impact can be examined. To examine the effects of trauma exposure this is a prerequisite and should be addressed more accurately in the limitations.

Additionally I have the following remarks:

Even though the authors give a citation for the sample description of the Red Deer sample (p. 9, l.4), I would prefer to have some data on this sample, especially response rates etc. in this manuscript. Additionally is there more those who did not participate? Do they differ from those who did?
The authors state that mental health support programs have been installed in the aftermath of the disaster. Has this been prior to the assessment? Is there any information on this? This might also have affected the results.

Two small flaws:

Abstract Methods part: "...7-12 grade students from Red deer, Alberta Canada (collected in in 2014..)"

p. 9 l. 34: "between the two cites…": I think it should be "sites"

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

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

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

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