Reviewer's report

Title: Associations between climate variability, unemployment and suicide in Australia: a multicity study

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Reviewer: Benjamin Vyssoki

Reviewer's report:

In their work "Associations between climate variability, unemployment and suicide in Australia: a multicity study" the authors focus on the association between suicide, meteorological data and unemployment status. They found a correlation between temperature difference, unemployment status and suicide numbers on monthly levels.

In general this study is from scientific interest, and the methods seem to be according to scientific standards. However several major question need to be answered, before publication can be recommended.

Major Points:

1) Is it possible for the authors to divide suicide into violent and non-violent suicides? Associations between meteorological data and suicide have been found mostly only for violent suicides

2) The Introduction is well written and gives a good overview on the research-field, however the Results and especially the Discussion are rather confusing.

The text here would benefit a lot from restructuring! Also some important aspects are not discussed sufficiently (gender aspect, seasonality).

3) Is it possible to merge the capitals in 2 or 3 groups (according to climate for example) instead of discussing the results for all 8 cities?

4) Please use headlines in the Results section to divide. Further it is not necessary to describe all results in details when there are Figures and Tables with the results.

5) The authors write in the Discussion that there is evidence for an association between temperature and suicidal behaviour in humans, however the references given (references 26-29) are not supporting this hypothesis.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests’