

## ***Interactive comment on ““We can help us”: Does Community Resilience Buffer Against the Negative Impact of Flooding on Mental Health?” by Torsten Masson et al.***

### **Anonymous Referee #1**

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#### **\*\*General comments**

This well-structured, tightly written manuscript addresses an important emerging research topic: social processes in the recovery of individual livelihoods after a disaster. I commend the authors for the courage and the initiative to undertake field research on such a sensitive topic immediately after a flood. I consider this kind of focused studies essential to expand our knowledge on resilience to climate change impacts. Although the small cross-sectional sample has inherent shortcomings, detailed case studies such as this nevertheless lay the groundwork for subsequent integrative research. The study offers promising entry points for future research on the differences

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between collective and interpersonal social support. I expect that the authors do not have the necessary data to respond to all my comments below, as they could not plan for all those aspects when designing the study in such a short timeframe. However, I would suggest to mention these caveats in the Discussion/Conclusion section to offer some guidance to similar endeavours in the future.

#### **\*\*Specific comments**

Please give more information on the Bavarian study region, such as number of residents and settlement structure. Particularly if the respondents live in small groups of houses, which lie within the borders of the same township but are dispersed hamlets/villages, then community level ("people in my community", p. 11, line 254) and interpersonal level ("people close to me", p. 11, line 259; "family, friends, etc.", p. 16, line 396) may overlap and may encompass the same persons. The correlation of .22 between the two social support factors does not suggest this is a major problem, though.

The authors are very prudent in referring to "perceived" consequences and "perceived" social support throughout the manuscript, since those factors were measured using Likert scales instead of monetary/physical units like damages in Euro, depth of inundation at the doorstep, work hours of external help, value of donated materials in Euro, etc. However, the findings on perceived consequences and perceived social support are interpreted as if they actually took place (for instance, in the opening sentence of the Discussion). I fully acknowledge the limits in data collection when putting together a questionnaire on very short notice and when approaching residents who are more concerned about rebuilding their home than participating in a survey. Nonetheless, I would very much welcome if the authors could add any validation how well subjective consequences and support conform with objective damages and assistance.

Judging from the exemplary items given in the Measures section, both collective and interpersonal social support were measured (1) referring to potential not received sup-

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port ("My community has resources it needs..." not "My community employed it resources to..."; "... if I need someone to talk to" not "I talked with somebody"); taken literally, the measures capture whether support COULD have been provided, but the authors assume that it WAS provided; and (2) referring to any situation not the particular June-2016-flood; although the CART inventory seems to refer to catastrophic events (p. 15, line 377), natural hazards (p. 17, line 412) or disasters (p. 19, line 470). This might mean weak congruence between independent and dependent variables, and could point to even stronger associations if more congruent measures were used.

In light of the particular situation when the questionnaire was distributed and the response rate of 20%, I am concerned about a potential self-selection bias in the sample, for instance that particularly those least (because they had already rebuilt their livelihoods, and had no other more pressing concerns) or those most affected by the June-2016-flood (because they wanted to share their plight) were willing to participate. Could the authors compare the damages suffered in the sample households (as for instance reported in claims to insurances or public support funds) to the distribution of damages in the entire study region? Do you have anecdotal evidence from handing out the survey materials to prospective respondents? This could be helpful advice for future post-disaster studies how to improve survey compliance.

The authors already caution against inferring causality from cross-sectional data in the Conclusions, however, considering the strong causal assumptions underlying the entire manuscript, I suggest to direct the reader to this essential caveat much earlier in the manuscript. I find the issue of causal direction most critical between mental health and life satisfaction, both measured at the same point in time. Yet, life satisfaction is presented as "a long-term subjective resilience indicator" (p. 13, line 311). Even if respondents were instructed to state flood consequences and social support in reference to the first few weeks after the flood event (Were they indeed instructed to do that? The Method section is not so clear on that.), their view on consequences at the time of completing the survey some weeks later might easily be coloured by damages

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that became apparent only after some weeks (e.g. to foundation walls) or by assets that initially appeared destroyed but could be repaired or salvaged or sold, or their view on support might be coloured by more recent experiences of willing or hesitant neighbourly help. The more blurry the temporal sequence from consequences to life satisfaction, the more the assumed causal chain is put into question.

Fig. 1c presents the social support deterioration model, but the manuscript does not report results on the mediating role of social support on mental health. Why?

\*\*Technical corrections and typos

Provide a full list of all questionnaire items in an Appendix. Abstract, line 25: might has underestimated. p. 4, line 81: Stein et al. p.4, line 84: one bracket too much. p. 4, line 86: Clarify whether this sentence refers to Sekulova & van den Bergh or Möllendorf & Hirschfeld. p. 5, line 103: one bracket too much. p. 5, line 107: one bracket too much. p. 8, line 181: one bracket too much. p. 9, line 214: perceived negative consequences flooding. p. 12, lines 283-286: coefficients differ from Table 2. p. 13, line 313: effect of negative consequences on interpersonal social support does not appear in any Table or Figure (unless I overlooked this). p. 18, line 458: resources of social and social life. p. 31, Figures 3 and 4: use "collective social support" instead of "community resilience".

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-389>, 2019.

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