

Interactive comment on “Perception of the flash flood hazard by the population of Mindelo, S. Vicente (Cape Verde)” by Bruno Martins et al.

Anonymous Referee #2

Received and published: 21 January 2019

The manuscript deals with the factors influencing perceptions of flash flood risk in the Republic of Cape Verde, including variables such as demographic characteristics, previous flash flood experience or public support for protection against flash floods.

In general, the paper is clearly structured (introduction, description of geographic context of study, methods, results, discussion). My main concern/s refers to the (explication of the) basic research question/s the paper aims to address and to the analyses applied to investigate this question. At the moment, the authors do not specify clear research hypotheses which makes it a bit difficult to understand the “story” the paper aims to tell. It seems reasonable to explore the interrelations between different variables on flash flood risk such as risk perception, causal attributions or public support and between flood-related perceptions and socio-demographic variables. However, I

C1

found it somewhat hard to understand the focus of the current research and to follow through the presentation of the results. Furthermore, the analyses conducted do not always seem to be suitable (e.g. principal component analysis). Finally, language editing might benefit the paper and I would like to recommend this to the authors.

In the following, I will detail my concerns and comments following the structure of the paper.

Abstract The abstract could need a bit of restructuring to clarify what exactly the independent variable/s is/are (perceptions of flash flood risk and/or “behavioral decision making when confronted with this natural hazard” and/or knowledge about flash floods).

Introduction Although the authors distinguish between three (broader) issues the current research aims to investigate (p. 2, lines 28-33), their specific research questions remained somewhat vague to me. Therefore, I would recommend to the authors to specify their research goals more clearly, indicating the dependent and independent variables of their analyses. Furthermore, I would invite the authors to specify their research hypotheses (if applicable).

Methodology Figure 2 (p. 4, line 20) is a bit hard to read. The measures included in the questionnaire might be presented in a table, including name of the measure, number of items & example item (if applicable), response scale. Such a table would present the information in a more comprehensible way. The method section might be further subdivided into subsections such as “Sample / Participants”, “Measures”, “Statistical analysis”. The authors may also want to provide more detailed information about the data collection process. The authors measure most of their items on 5-point likert scales but create indices ranging from 1 to 100 to aggregate their items into constructs. However, I can’t find any information on how the responses to the likert items were transformed into the indices? The numbering of the tables seems to be incorrect (number 2 is missing). As a consequence, the description of the results does not refer to the correct table numbers. P. 5, line 10 “in which values close to 100

C2

mean that the individuals present adequate perceptions about flash flood hazard” – It is unclear to me why higher scores equal more adequate perceptions? Is there some kind of objective risk indicator involved? P. 5, lines 29/30 “suggesting that values close to 10 mean that the subjects present an accurate knowledge regarding the phenomenon of flash floods” – see last comment P. 6, line 1 ” proactive behaviour versus passive behavior” – No information is given which behaviors were categorized as proactive or passive behaviors. P.6, lines 16-18 Does this refer to the factors depicted in Table 9? If yes, this table might be moved further up in the manuscript.

Results In general, the results section(s) may be improved by presenting the results of the descriptive analysis (sect. 3.2) and correlational analysis (sect. 3.3) a bit more streamlined. That is, the authors may want to present their results referring more closely to their specific research questions to better guide their readers through the presentation of their findings. The tests for differences between groups (gender, prior experience, age) may be run with a more parsimonious model such as ANOVAs or - even better - logit models, including the demographic criteria and prior experience as factors (no separate tests). If applicable, MANOVAs could be used to test for similar effects across different dependent variables. The description of variables is not properly written in some of the tables (e.g. table 6). The results of tables 9 & 10 seem a bit odd to me. I do not understand the why the authors included socio-demographic characteristics and perceptions regarding flash flood events (e.g. causal attributions, public support) in an exploratory factor analysis (principal component analysis). If the authors are interested in identifying different types / profiles of risk representations, cluster analysis seems to be a more suitable tool.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-312>, 2018.