

## ***Interactive comment on “Earthquake preparedness among religious minority groups: The case of the Jewish ultra-orthodox society in Israel” by Tehila Erlich et al.***

### **Anonymous Referee #2**

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Erlich et al. study “. . . the effects of religious beliefs and customs on earthquake preparedness among the Jewish ultra-orthodox community in Israel, a significant religious minority with unique social, cultural, and economic characteristics.” They conducted a survey and in-depth interviews among 228 members of this group and concluded that despite the long-documented history of damaging earthquakes in the Levant area, the majority of that community have a low level of hazard knowledge, awareness and preparedness. Based on their findings, Erlich et al. discuss the reasons and factors that hinder preparedness among the examined group and suggest ideas and ways to cope with these difficulties in order to improve awareness and upgrade readiness among these people.

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This is a very important study that points to a severe lacuna in earthquake awareness and preparedness within the ultra-orthodox community of Israel. Although the study focuses on a specific group, its outcomes and understandings can be of interest to elsewhere places and other societies. However, the manuscript is not yet ready for publication. It needs a major revision and another cycle of full review. Hereby I will explain my opinion, what is needed to improve the manuscript and prepare it for publication.

### Earthquake hazards and damage in Jerusalem

Section 2.3 does not present the state of the art knowledge and understandings regarding earthquake hazards and damage in Jerusalem. For example, Avni (1999) presented detailed lists and reports of what had happened in Jerusalem during the 1927 earthquake; Salamon et al. (2010) conducted earthquake hazard evaluation for Jerusalem; Zohar et al. (2017) presented updated list of earthquakes and the damage they cause in Israel, including in Jerusalem. With this respect, Section 2.3 and Table 1 should be revised thoroughly.

### Data

Overall, the raw data is not presented and the little that is shown does not allow the reader to follow and repeat the results and the final conclusions. The raw data should be presented in full, in tables and diagrams. Quantitative analysis: 1. There is a need to present the online questionnaire in full, may be as an appendix.

2. Please present the demography of those who responded and filled the questionnaire, i.e. the information relevant to this study such as age, gender, income, education, area of living, social subgroup, etc. This of course should be kept within the confidentiality and anonymity promised to the reviewees, but still allow sufficient transparency of the database. Section 4.1.1 is not enough.

3. Please report how many forms were distributed against how many were replied and

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filled.

4. The findings from the questionnaires should also be presented in full as a background for the analysis of the results and the discussion.

Qualitative analysis 1. Even though the interviews were open, there is a need to show the main leading issues and questions, as well as the answers, at least in a schematic way. Otherwise, there is no way to infer and conclude the systematic attitude or approach of the examined population.

2. The demography of those who participated in the open interview should also be presented. Which segment of the ultra-orthodox group do they belong to? Is this segment represent the entire ultra-orthodox group?

3. Please note how many people were approached against how many were interviewed.

Lines 256-7: “We then created a shortened version of the questionnaire to spread via an online form.” However, in lines 371-2 it is said: ““Most people do not own a television at home, and many do not have access to the internet or the radio”. The reader may understand that those who replied online does not represent that group?

### Analysis of data and Results

It is not possible to evaluate how much the level of knowledge and awareness of the ultra-orthodox group differs from the ‘reference standard’ of Israel. There is a need to present the ‘common’ level of knowledge in Israel, and by comparison, show the difference (sections 4.1.2, 4.1.3). Likewise, there is a need to show that the group of interviewees (228 responses) does represent the ultra-orthodox group (one million), so that the results of this study can be generalized and represent the group. Some sections or paragraphs seem to belong to the Introduction rather than to the results, e.g. lines 382-390, 402-404. In any case, such facts or statements (e.g. lines 389–90: “... most ultra-orthodox schools still do not allow military personnel to conduct

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trainings”) should be supported by a proper source. Sometimes it is not clear whether the given statement refers to a direct outcome of this study? For example, lines 395-398 regarding the “Low Socioeconomic Status”. Lines 442 – 444: belong to technology section in lines 481?

### Section 5 Discussion and Conclusions

Section 5 is hard to follow. There are issues that belong to the introduction, discussion, conclusions and recommendations, and I got confused which is what. For example, the content in lines 491-495 sounds reasonable, but is it a result of this work or just ideas taken from the given references. Sometimes the phrasing seems to ‘hide’ the finding of this study, for example, lines 489-491: “Past research has much to say regarding how emergency preparedness among marginalized communities can be improved, including both conduct during emergencies as well as recovery efforts following disasters. Many of our findings support this literature.” I think that this should be rephrased the other way around: first state in your own words what you have found and then discuss whether it supports (or not. . .) past research and give the appropriate reference. The main understandings, outcomes and suggestions are scattered along the text and thus I would recommend splitting Section 5 into three: Discussion, Conclusions and Recommendations.

### Conclusions

I recommend summarizing the actual findings of this work as independent statements, rather than mentioning that: “Many of our findings support this literature. . .”.

### Recommendations

Although the recommendations (e.g. lines 549-55) are part of the conclusions, I suggest listing it also in bullets or in a table, so as the authorities, who would (or should) be interested to implement the outcomes of this work, get to the point simply and easily.

Oversimplification of the situation?

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Lines 514-15 state that “Given that the ultra-orthodox constitute a religious minority in Israel, the state authorities’ representation of these communities is minimal” The status of the ultra-orthodox minority in Israel is unique. On one hand, they are a significant part of the government, sometimes even the balancing power, and are able to achieve much influence, beyond their relative share in the population. On the other hand, they refrain from accepting the Israeli authorities as is, and adhere to their own community leaders. They seem to prefer to isolate themselves and maintain their own way of life. In that sense, once you conclude and recommend that (line 554-5): “In addition, community leaders should be asked to give their support before approaching the community they lead”, it means (in the subtext) that the community leaders may share the responsibility for the “. . . low level of hazard knowledge and a high level of disbelief that a devastating earthquake would occur in their area in the near future.” (lines 39-40). As a result, a possible recommendation could be that instead of authorizing “. . . local non-governmental organizations official responsibilities in the area of earthquake. . . “ (line 553), the local community leaders should authorize the formal Israeli authorities the responsibilities in the area of earthquake. This is a very complex situation and it means that improving the level of knowledge and awareness in this minority group is not just a simple list of ‘to do’.

### Referencing

Many statements sounds reasonable, however, they need to be supported by a reference or source of data, e.g. line 90; lines 209-210: “With regard to earthquake preparedness, most members of the Jewish ultra-orthodox society in Israel live in . . . buildings that do not meet the standards for earthquakes.”

### References not mentioned in the text

Avni, R., 1999. The 1927 Jericho Earthquake, Comprehensive Macroseismic Analysis Based on Contemporary Sources. (PhD.). Ben Gurion University, Beer-Sheva.  
Salamon, A., Katz, O. and Crouvi, O. (2010). Zones of required investigation for

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earthquake-related hazards in Jerusalem. *Natural Hazards*, 53: 375-406. Zohar, M., Salamon, A. and Rubin, R., (2017). Earthquake damage history in Israel and its close surrounding - evaluation of spatial and temporal patterns. *Tectonophysics*, 696: 1-13.

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