Reviewer’s report

Title: Health service utilization after terrorism: A longitudinal study of survivors of the 2011 Utoya attack in Norway

Version: 7 Date: 10 November 2014

Reviewer: Anna Chiumento

Reviewer’s report:

Many thanks to the authors for this interesting paper with clear learning for ensuring future responses to the mental health needs of populations exposed to this type of disaster. I recommend this paper for publication, and have below made some suggestions for minor revisions / grammatical errors for the authors to address or consider.

There are no major compulsory revisions.

General comments:

- The paper should be clearly positioned in relation to it's scope of generalisability - i.e. that the findings are applicable to similar situations in high income settings with developed public health and mental health services. This focus needs to be clear throughout the paper as the terms "terrorism" and "disaster" apply across a broad spectrum of settings, however the paper findings would not be applicable to many low or middle income settings.

- A key finding seems to relate to somatisiation. Are the authors familiar with the work of Dr Sumathipala in this area? He has conducted extensive research in the field of somatoform disorder post-disaster in the Sri Lankan setting which the authors may be able to draw upon for more in-depth discussion / recommendations in this area.

-- Please ensure that it is clear when the authors are referring to the outreach programme, and when they are referring to service utilisation - for example, the issue of follow-up being maintained (p. 13, line 1) is this in reference to the outreach programme or the MHS?

- Are there concrete recommendations the authors would suggest? It is mentioned that low-cost proactive outreach models should be developed. Are there any recommendations for the key features of these based upon learning from this study? Are there any comparative programmes in other settings? This seems like a key contribution this paper could be making and I would strongly urge the authors to address this.

Minor essential revisions:

Abstract:

- Background: proactive outreach programme - it would be helpful to have a line on the rationale for why this was introduced.
- Methods: confusion in term "semi-structured interview" which could be either qualitative or quantitative. Please clarify by stating these interviews used standardised questionnaires.

Background:
- First paragraph, please add references to back-up statements made, particularly sentences 3 and 4.
- p.4, line 10: Change "but" to "however".
- p.4, line 7: suggested rewording: "a shooting massacre was inflicted on the summer camp...."
- p.4, line 21/22: suggested rewording: "the young age of those affected, the fact that they were designated targets, AND BECAUSE many lost their close ones".
- p.4, line 24: suggested rewording: "proactive outreach PROGRAMME was modeled....."
- p.4, line 27: Define MHS before using this acronym.
- p. 5, line 2: suggested rewording: "all survivors BE assigned......"
- p.5, line 10/11: see generalisability comment above - this paper can contribute to knowledge in high income settings with infrastructure to support this sort of programme. Please ensure this focus is clear.

Method:
- Why the cut off of children under 13 being excluded?
- p. 5, line 20: participants asked to complete a questionnaire at the end of the interview - what was this questionnaire on?
- p.5, line 21-24: Confusing way to report. Suggest authors rework to present as numbers at T1, numbers at T2, those who did both, and that those who did either T1 or T2 did not differ significantly.
- p.6, lines 3-5: Suggest the authors create a sub-section on ethics. This should include the information in these sentences, and also include: (a) Consent: was this just from participants or also parent / legal guardian consent for minors? (b) who were the assessors conducting interviews? What training did they receive - including in responding to participant distress given the nature of the questions being asked? How was consistency in the instrument administration ensured? Were referrals made following identification of distressed participants, and to what extent may this have been another route to care for these participants? What support was provided to assessors (i.e. self-care / supervision)? (c) were any participants excluded due to severe mental distress leading to questions of capacity etc? What benefit did the participants get from their involvement in the study - compensation for time / travel, referral to services (where required) etc? The potential ethical issues seem quite broad and I feel warrant a short section to be addressed.

Measures:
- This section doesn't mention tools used to measure pre-disaster health service utilisation, yet this information is included in the results. Please add this.
- p.6, line 16: can you identify examples of the potential profession of contact persons?
- p.6 line 21/22: please explain why crisis team contact was only assessed at T1.
- p.7, line 4: I don't fully understand the scoring system here. Please explain for a non-technical audience.
- p.7, line 15/16: Why refer to this as "the short version of original SCL-25". It would be far clearer to just say the "SCL-8".
- p.7, line 19: missing comma between rapid heartbeat and nausea / stomach problems.
- p. 8, line 1: Measurement for terror exposure - can you please identify what instrument / section of instrument was used here?
- p.8, line 16-19: please clarify the definition of "settlements" for a non Norwegian audience.

Statistical analysis:
- p.8, line 26: what are the 6 factors relevant? Can you provide more detail on how these were identified?

Results:
- p.9, line 8/9 and line 15: I don't understand "18, 2 years" or "19, 3 years" - is this 18 years 2 months / 19 years 3 months? Please address this to ensure clarity.
- p. 9, line 16: can you provide numbers on the increased utilisation of services for those with MH problems?
- Overall: this section is very short, and the discussion more expansive. On p.12, lines 3-10 there are more results added in. Please revisit the presentation of results / discussion and ensure clear organisation between the two.

Discussion:
- p.10, line 4: the sentence on despite primary healthcare outreach suggests that an aim of the proactive approach was to prevent MHS use. Is this what the authors mean to imply? My understanding was that the aim of this outreach was to facilitate referral for those in need. Please clarify here and also in the introduction when this programme is introduced.
- p. 10, line 11: this sentence needs a reference.
- p.10, line 25: remove the word "yet" - this language is too informal.
- p.11, line 1: as suggested above, this should be raised in an ethics section - clarifying the extent to which the study was integrated with service provision for those with distress. This would help position this statement better.

Interpretation and comparison:
- p.11, line 14: can you reference the trial / media coverage statement?
- p. 11, line 15: change "one of six" to "one IN six"
- p. 11, line 16: "afterwards" is not clear - after when and until when?
- p. 11, line 25: I would expect frequency of MHS interaction to be higher than primary care - if referred for support this often leads to participation in an intervention which lasts for a period of weeks / months and necessarily requires higher frequency of interaction. Perhaps this should be recognised here?
- p. 12, line 18: "one of five" should be "one IN five"
- p. 12, line 19: observation about failure to identify and meet needs of those identified as suffering distress: it seems important to know if these individuals were in contact with services at all - i.e. is this a failure at the primary healthcare level to identify and respond, or because of non-attendance at primary healthcare?
- p.13, line 1: The issue of MHS utilisation after relocation: again, is this people networked into services prior to moving and therefore continuation of services, or is this relating to the outreach programme following people? This is not clear.
- p.13, line 5: the suggestions that early symptoms indicating a need for prolonged treatment seems to contradict earlier statements about natural recovery following disaster.
- p. 13, line 7: remove the word "rather"
- p. 13, line 9: What is a "particularly adverse manifestation of a long-term MH condition? This statement is not at all clear.

Conclusion:
- This needs to better summarise the paper itself.
- p. 14, line 12: suggested rewording: "hence further improvement is requested" to "further improvement in outreach models is required".

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests.