Reviewer's report

Title: Development and implementation of e-learning modules aiming to prevent adolescent suicidality by training gatekeepers: protocol of a randomized controlled trial

Version: 3
Date: 1 December 2013

Reviewer: Sally Merry

Reviewer's report:

This protocol describes a randomised controlled trial to assess the success of the development and implementation of e-learning modules designed to prevent suicide in adolescents. The rationale for this work is well made. This is an important and worthwhile area but I have a number of concerns about the protocol as it has been submitted.

1. Despite the title, the actual aim of the study is to test the effectiveness of an e-learning resource on the knowledge (and perhaps skills) of people working with adolescents. There is no plan to test the impact on suicide rates, although this would be the overarching goal of this initiative. However, this is not the focus for this protocol.

2. The outcomes measures for this study are three questionnaires measuring perceived knowledge, perceived self-confidence and actual knowledge about adolescent suicidality of participants (P5). The measures have apparently not been validated, and there is no description of any psychometric testing of the questionnaires.

   a. On page 8 there is some description of the process by which the actual knowledge of the participants will be tested according to their response to questions about 6 vignettes that have been developed. I wonder if there has been any check on the validity and reliability of these questions. Will there be a "gold standard" answer with experts? Will there be any check to ensure that the questions adequately discriminate those who are knowledgeable from those who are not?

3. The participants have not been well defined (P5). They are described as professionals who work with adolescents. This needs to be more specific to remove any ambiguity. There are a number of professionals who may “work with” adolescents by employing them, for example office managers employing adolescents in clerical roles. I am sure this is not what is meant here but this should be made clear.

4. The online e-learning resource is based on the QPR training developed in 1995. The authors have not included any information on the effectiveness of this training.

5. The sample size calculations have not been done with reference to any outcome measure and are theoretical only.
6. There does not appear to be any measure of adherence to the e-learning modules. I would have thought that these data would be easy to collect from the computer programme, and perhaps this is being done. If so it would be helpful to have this included in the analysis.

7. As there is a very broad recruitment strategy, the results will not be generalizable.

8. The e-learning is said to teach skills as well as knowledge. However there is no objective measure of the skills of the participants, and it is ambitious to try and teach skills through the provision of information that is provided only online. Some justification of this claim, or some revision of the text to make it clear that this is not a target of the intervention, would be helpful.

- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)
  o Revise the title and the text to make the overall aim of this particular study clear (i.e. that it is a study to test the impact of the e-learning on the knowledge of participants).
  o Include the primary outcome in the abstract
  o Define participants more precisely
  o Include an analysis of the psychometric properties of the outcomes measures
  o Provide any available information on the effectiveness of the QPR intervention on which this teaching is based.
  o Expand on the sample size calculations, including the limitation that this has not been done on data from the primary outcomes.
  o Comment on any measures of adherence to the e-learning, and if possible included this within the analysis, otherwise it should be discussed in the limitations section.
  o Provide a justification for the claim that the training is likely to increase skills of the participants or revise the text and Table 1 to make it clear that this intervention aims to increase knowledge and self-confidence but not necessarily skills.

- Minor Essential Revisions
  o Although reasonably well written, the English could be improved with some editing.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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