Reviewer's report

Title: Effectiveness and Cost-Effectiveness of Internet-based Interventions for Children, Youth, and Young Adults with Anxiety and/or Depression: A Systematic Review and Meta-Analysis

Version: 3  Date: 4 April 2014

Reviewer: Marie Yap

Reviewer's report:

The aim of this review is important and relevant, and the findings are useful for researchers, academics and practitioners in the field working with young people. I have highlighted various issues which need to be addressed before the aim of this review can be more adequately fulfilled.

Major Compulsory Revisions

Discussion

1) Pg 10 “The effect of internet-based interventions may be explained by: (i) enhanced participant knowledge and coping skills introduced by the internet-based self-help content; (ii) more interaction between participants and therapists; (iii) enhanced parental or teacher guidance to cope with anxiety and depression; and /or (iv) the interactions among the three components.” —while it is fairly evident why (i) is a likely mechanism, it is less clear how (ii) and (iii) might operate. Can the authors please elaborate? Did the authors of the included papers discuss this issue?

2) Pg 10 The authors’ comments about finding significant effects for anxiety but not depression are contrary to the transdiagnostic approach to treatment of these disorders. Can the authors please comment? Also, it seems that Keller 2010 is the only study that showed significant positive effects on both anxiety and depression symptoms, whereas Reid 2011 and Storch 2011 were ineffective for both. Any comments on these observations? Given that one of the intended advantages of online interventions is its scalability, a transdiagnostic approach is clearly desirable. It would be important to highlight specific considerations for the design of future internet interventions, so comments in that regard in the context of this review would be valuable.

Minor Essential Revisions

Title

1) Is the review of effectiveness or efficacy? The title should be amended accordingly.

2) Likewise, the authors set out to evaluate cost-effectiveness, but since there is no data on that, the title should not include reference to it.

Background
3) First sentence--please specify whether this is lifetime or 12-month prevalence.

Method
4) Why did the subgroup analysis by quality rating include only studies with strong vs. moderate quality but not those with weak quality? It should be made clear in the Data Analysis section that weak quality studies would be excluded, before stating 'We undertook a subgroup analysis by quality rating (strong vs. moderate).’ In fact, it should be specified in the Critical Appraisal section how the ‘global quality rating’

4) The authors should specify in the Data analysis section:
   a) How they would use the heterogeneity statistics to determine the quality of evidence, e.g. I2<25% = high quality evidence; citing a relevant source
   b) What sensitivity analyses they would run

Results
6) Table 1 –instead of the reference number in the left-most column, using the Author, Year format like that used in the forest plots will improve the readability of the Table.

7) Figure 1 should be done in PRISMA format. The key missing information are the reasons for “Records excluded after full-text screening” and other stage labels in the process of study inclusion.

8) Pg 8: “All studies but one [13] explicitly stated that cognitive behavioral therapy (CBT) was applied in the interventions.” Can the authors briefly state what the one study used?

Discussion
9) Pg 10-11 “Second, the findings may not apply to patients with severe anxiety/depression disorders since all participants from the included studies had mild or moderate symptoms” This is unsurprising, but on a positive note has implications for indicated prevention. The authors should note this briefly.

10) Pg 11, first paragraph—the limited extant findings also suggest that augmentation of the internet interventions are required to maintain the positive effects.

11) Pg 11, last paragraph—“this type of intervention”—please specify which type

12) Pg 12 Inventory names should have the first letters capitalised.

13) The authors should comment somewhere in the Discussion about how their findings (and included studies) differ from the two published narrative reviews. Relevant comments from those reviews should also be referred to, especially if they relate to other studies that were not included in this meta-analysis, or commented on similarities or differences in existing intervention programs,
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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.