Reviewer's report

Title: Usability evaluation with adolescents and mental health professionals to develop a web-based cognitive-behaviour therapy program for adolescents with anxiety disorders

Version: 2
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Reviewer: Clare Rees

Reviewer's report:

It is commendable that the authors have sought to test the usability of their online treatment program and the method (Illuminate Live) is a sophisticated way of achieving this. As more and more online treatment programs are rolled out it is essential that they are first tested for usability. Indeed, the technical aspects of this paper are its strengths.

Major Revisions

However, there are a number of areas that are not clear and effect the conclusions that can be drawn from the study. Mainly, this is to do with the small group of young people (N=4) who completed the testing. Even though the authors argue that a lot of useful information can be gained from small samples, the issue is that not enough is known about either the young people or the clinicians. For example, it is not clear who the clinicians were—we need more information about their demographics, profession, level of experience etc. In terms of the young people, what is meant by: ‘young people with a history of anxiety-related issues’? This doesn’t tell us much about how severe these young people are or what sort of anxiety-related issues they have or have had. Had they prior experience with psychological treatment, in particular, CBT? It wasn’t really clear whether the participants were selected because they would relate to the content or just because they were the right age range. Why were participants recruited if between ages of 13-25 when the program was designed (according to the introduction) for young people 13-17? In terms of participant selection how was presence of cognitive impairment or psychiatric illness established?

It was not clear in the introduction how Breathe was initially developed i.e. on the basis of what program or evidence? Whilst it is good to test usability, what about the steps involved in actual program development in the first place? More background in the literature review as to the development of Breathe would have helped contextualise this study. Is Breathe designed to be more of a prevention program or a treatment program? If the latter, what level of participant severity is the program suitable for? How do participants become eligible? Is there anxiety assessed in the program? How?

Overall, I think that this paper describes a very nice approach to assessing usability but it is let down by the lack of detail about the Breathe program itself,
and in particular, who the program was initially designed for. Additionally, far more detail is required as to the participants, particularly as there were so few. What sort of anxiety problems have they previously had, were they of clinical severity? Had these young people received treatment before and so on.

**Level of interest:** An article of limited interest

**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