Reviewer’s report

Title: An Evaluation of Large Group Cognitive Behaviour Therapy with Mindfulness (CBTm) Classes

Version: 0 Date: 07 Feb 2019

Reviewer: Lena Wimmer

Reviewer's report:

Thank you very much for providing me with the opportunity to review this paper. It reports an ex post facto analysis of patients who received 4-session Cognitive Behavior Therapy with mindfulness (CBTm) in a large group in order to gain insight into the acceptability and effectiveness of this approach. Considering the practical relevance of the topic, the manuscript has the potential to significantly contribute to the literature despite methodological limitations regarding the study design. In general, I find the paper to be well written. Nevertheless, in my view major changes are required before the manuscript can potentially be accepted for publication. My main concerns stem from the facts that 1) no rationale is given for using the particular therapy program under investigation, more precisely regarding the inclusion of mindfulness in addition to CBT, 2) the analytical approach is not described with sufficient clarity in order that readers could, for instance, reproduce the calculations, 3) parts of the conclusions, particularly regarding the effectiveness of CBTm, are not justified given the study design.

Detailed comments

Abstract:

p. 3 l. 16: "adult outpatients with a mood or anxiety disorder" is apparently not entirely true because 10.7% of participants were given a primary mental health diagnosis that was not a mood or anxiety disorder. Please correct.

p. 3 l. 50: "The classes are also effective in reducing symptoms of anxiety and depression": This is an unjustified conclusion. It is true that participants who received CBTm on average showed reduced symptoms of anxiety and depression between baseline and follow-up. However, these changes cannot be traced back to CBTm due to the lack of control groups and associated lack of random assignment to treatment conditions.

p. 3 l. 51 f.: "The clinical significance of symptom improvement remains unclear": Considering the finding that the reductions of anxiety and depression were not clinically significant (e.g., p. 14 2nd paragraph) it would seem more appropriate to say that symptom improvement was not clinically significant.
Background:

It becomes clear why large-group CBT was investigated, yet no rationale is given why mindfulness was added to CBT. Furthermore, a well-established 8-week intervention program that combines CBT and mindfulness is Mindfulness-Based Cognitive Therapy (MBCT). Therefore I was surprised to see that, provided that mindfulness should, for whatever reason, be added to CBT, an apparently new approach, CBTm, was introduced rather than MBCT adapted to the desired 4-session format.

Methods:

Instructors were reported to be formally trained in CBT (p. 6 l. 41). What was their qualification in mindfulness?

p. 7 l. 51 f. "This treatment gap was controlled for in relevant analyses": How was this done? For instance, was the number of days between session 4 and the 1st follow-up session included as an independent variable or covariate etc.? Please provide more details.

p. 8 l. 24 f.: "Participants' self-reported acceptability of the CBTm classes was assessed using two items from the evaluation form they completed immediately after each session". Why were these two items selected and what were the remaining items of the evaluation form?

Please provide references for the GAD-7 and the PHQ-9, and please explain abbreviations when they are mentioned in the text for the first time.

The order in which the steps of the analytical approach is presented does not match the order that is given in abstract, introduction, and results. For instance, the results section reports acceptability before changes in anxiety and depressive symptoms, in the analytic strategy section the order is reversed. I think the article would be easier to read if the order was kept the same throughout.

p. 9 l. 48: "Primary analysis used a multi-level mixed-effects linear regression model": Which levels were implemented in the model? As this was a mixed-effects model, which factors were random and which were fixed?

p. 9 l. 56 f.: "The model controlled for the time between baseline and class 1, as well as treatment gap between class 4 and follow-up during the first group session": How was this implemented in the model?

p. 10 l. 27 f.: "The variables of interest were regressed against a binary variable indicating completion of at least 4 classes": This sounds to me as if the completion criterion was participation in at least 4 classes, however in the results section the completion criterion is reported to be participation in at least 3 classes (p. 10 l. 51). Please clarify.
Results:

p.11 l. 19 f.: "Two significant baseline predictors of CBTm class completion were found after adjusting for other variables": Which variables were adjusted for and how was this achieved?

p. 11 l. 31 f.: "All other baseline variables (GAD-7 score, sex, type and number of mental health diagnoses) did not significantly predict class completion": Please provide p-values for insignificant tests.

The finding that depressive symptoms increased between class 4 and follow-up (p. 12 l. 29) would be very interesting to elaborate on in the discussion.

Discussion:

As to the conclusions regarding effectiveness and clinical significance, please refer to my comments on the abstract.

p. 13 l. 34f.: "We anticipated some clients would achieve symptom improvement or remission at earlier stages and not require the 'complete' 4-session intervention": This explanation for dropout does not seem consistent with the finding that "participants with more severe baseline depression or lower education were more likely to drop out" (p. 15 l. 5f.), because it is highly unlikely that persons with severe depression experience massive reduction of symptoms before completing 4 sessions of large-group CBTm. I would therefore recommend a more careful and balanced interpretation of dropout rates, also because reasons for dropout were not assessed (p. 13 l. 44f.).

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No
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