Reviewer’s report

Title: Effect of traditional yoga, mindfulness based cognitive therapy, and cognitive behavioral therapy, on health related quality of life: a randomized controlled trial on patients on sick leave because of burnout

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Reviewer: Karen Mustian

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Title: Effects of traditional yoga, mindfulness based cognitive therapy, and cognitive behavioral therapy, on health related quality of life: a randomized controlled trial on patients on sick leave because of burnout

The purpose of this study is to explore and compare the effects of traditional yoga, mindfulness based cognitive behavioral therapy, and cognitive behavioral therapy on health related quality of life in patients on sick leave because of burnout

Although this is a very worthwhile topic that needs to be studied, some questions and issues need to be addressed as I listed below:

1.) Background

a. On page 5, Yoga in health care, lines 15-21

Authors introduced that yoga had been studied previously and has effects both on physical and emotional levels. It will be helpful if authors can explain more specific on the type of the yoga interventions (rather than using the general term "Traditional Yoga") and the target population and summarize the findings from current literature.

2.) Methods

a. On page 7, Traditional yoga, line 60

Table 3 showed the physical postures, breathing exercise, and meditation included in the Traditional Yoga treatment. However, different physical postures were practiced during weeks 1-
5 vs. weeks 6-20 and there was no breathing exercise involved during the first 5 weeks. Authors did not explain why different yoga contents were delivered after week 5. The subscales in SWED-QUAL were only assessed at baseline and post-20-week-intervention, we did not know if the changes in SWED-QUAL responded to yoga contents delivered within first 5 weeks, weeks 6-20, or the combination. We also did not know if the effect from the first 5 weeks sustained or interacted with the effect from later weeks?

b. On page 10, Statistical methods,
I. Lines 14-16: Was the power analysis performed to determine the effective sample size?
II. Lines 39-43: Authors indicated that there were missing data in the subscales sexual function and partner functioning and stated that those data were not answered because patients lived alone. In table 5, authors reported that 35-41% of participants had no partners. Were those participants who did not answer the subscales sexual function and partner functioning the same participants who have no partner? If yes, did the authors control this issue? Did participants who lived alone/have no partner responded to the interventions on other subscales of SWED-EQUAL differently comparing to those who did not live alone and have partners?

c. In Table 2, one of the inclusion criteria was BMI 18-26. Why? Also, participants needed to be ≥50% sick-leave at the interview. What's the percentage range of participants' sick-leave? Were they normally distributed or the majority of the study participants had sick-leave between certain percentage range?

d. On page 6, Settings and patients, line 17: "Seven hundred and two persons…", maybe use people instead

e. On page 7, Interventions, line 25: "Both groups predicted…” This is not clear. Does this sentence indicate both MBCT and CBTI groups?

3.) Results
a. Overall, the "Results" section was too simplified while the "Discussion" section was lengthy. Some parts of the "Discussion" could be moved to "Results" section, for examples, the first paragraph on page 16 could be moved to "Results" section.
b. The inclusion criteria listed in Table 2 and the socio-demographic data presented in table 5 did not match. It will be helpful to show the characteristics/socio-demographic information based on the inclusion criteria.
c. It will be helpful to indicate the significant changes in figure 2.
d. Adherence, compliance, and adverse events (if any) were not reported.
e. On page 12, line 43. The sentence was not complete.

4.) Discussion
a. Overall, the Discussion section is extremely lengthy. Some paragraphs fit better in the Results section.
b. On page 17, lines 47-57: Authors have been aware of the limitation of the subjective measure of physical situation. I also agree that adding objective measures of physical condition should be considered to better monitor the changes of physical functioning.
c. On page 23, lines 20-25: The statement of underestimation of the treatment effects was not clear. Can the authors explain more specifically which SWED-QUAL subscales and how they have been impacted by increasing the level of activity?

Overall, the results and the discussion need to improve for readers to follow better. A systematic table to summarize the changes in subdomains of each categories will be helpful to present the findings. This study is recommended for publication if the format and issues are improved.

**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.
Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.
No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics.

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

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