Reviewer’s report

Title: Mindfulness training for smokers via the Internet: a pilot study

Version: 3  Date: 9 October 2014

Reviewer: Claire Adams Spears

Reviewer’s report:

BMC Complementary and Alternative Medicine
Title: Mindfulness training for smokers via the Internet: A pilot study

The authors described a small pilot study of a mindfulness-based smoking cessation program delivered over the Internet. Results support the feasibility of the program; participants were able to use the website and showed relatively good compliance with watching intervention videos and practicing mindfulness (both through formal meditation and more informally in the context of walking, eating, and coping with urges). The modest abstinence rate of 15.7% is comparable to that found with quit line interventions, suggesting that interventions offered solely via Internet hold promise. Offering such mindfulness-based interventions via Internet could be an extremely cost-effective and impactful approach for teaching mindfulness to broader and more diverse populations. The subject matter would likely be of interest to readers of BMC Complementary and Alternative Medicine.

Strengths of this study include the use of an intent-to-treat approach, biochemical confirmation of smoking behavior, and inclusion of lower-SES smokers. Primary weaknesses include the small sample size and lack of control group. However, these factors are acceptable given that this is a pilot study of a potentially impactful intervention that could be disseminated widely and cost-effectively.

Throughout the manuscript, we suggest areas where the authors could provide important methodological details. There are also some inconsistencies in the numbers reported in the text versus tables, as well as several typos, incomplete sentences, and other grammatical errors. In addition, we suggest that the authors examine and report associations between key variables that changed over the course of treatment (e.g., mindfulness, anxiety) and abstinence.

More detailed comments and suggestions are offered below (categorized as Major Compulsory Revisions, Minor Essential Revisions, and Discretionary Revisions).

MAJOR COMPULSORY REVISIONS

MATERIALS AND METHODS

Please provide important details regarding the treatment and methodology:
1-Please specify that the orientation and assessment sessions were in person rather than online (if this is indeed true)

2-Please provide more information on the online manual. Is this the same manual that has been used for in-person treatment, or was it adapted for Internet use?

3-What exactly did the coaching phone calls cover? Was there a particular format for these calls?

4-Please provide more information on the Quit Date Retreat and how this was adapted for the online intervention.

RESULTS

5. The text indicates that 81 individuals who were declined from the parent study due to scheduling conflicts were invited to the MTSO orientation; however the consort diagram (Figure 1) indicates that this was actually 98 people. Please clarify and make these numbers consistent.

6. Of 45 people who attended orientation, 26 completed enrollment. Did those who did not enroll fail to do so because of lack of Internet access or for other reasons? This is an important issue because future applications of this intervention will presumably only be available to people who have Internet access.

7. The authors noted that there were not significant demographic differences between participants in MTSO and the parent study. It also seems extremely important to compare the 26 participants who enrolled in MTSO versus the 55 who did not. Did these two groups differ on SES, age, gender, race/ethnicity or baseline smoking behavior?

8. In section 3.3, the authors note that the mean number of video classes completed was 5.55; however, in the Discussion (section 4.2) they state that this number is 4.64. Please clarify this discrepancy.

9. Please provide the range of video classes completed.

10. How was being a “completer” defined for this study?

11. With a mean of 5.55 of 8 and a standard deviation of 2.48, we can see that no one falls a full SD above the mean, and thus the data seem to be negatively skewed (with some participants perhaps viewing a very small portion of the videos). Given this, is mean the best indicator of central tendency?

12. Were increases in FFMQ scores or reductions in DASS scores associated with abstinence? It seems odd to present change scores for these variables but not examine their associations with the primary outcome.

DISCUSSION

13. The authors compare the abstinence rate to that found in a recent
meta-analysis of quit lines. Please also discuss the current abstinence rate in comparison to the abstinence rate found in Bricker et al.'s mindfulness-based smoking cessation delivered via Internet.

14. Please make sure that the numbers in section 4.2 match up with the numbers in the Results section.

15. It will be important to discuss whether changes in mindfulness, stress, anxiety, or depression were associated with abstinence outcomes.

MINOR ESSENTIAL REVISIONS

BACKGROUND

16. References are cited numerically in the body of the paper but are not numbered in the reference list. Please make this consistent so that readers are able to reference specific citations.

17. In the first paragraph, the authors report that a recent meta-analysis of quit lines found a 6-month abstinence rate of 12.7%. However, readers may not be familiar with how that rate compares to other treatment modalities. It would be helpful to provide abstinence rates for smokers who attend some of the more common in-person treatments as well as people who attempt to quit on their own. This would help to put the 12.7% rate (and also the rate found in the current study) into perspective. The authors might consider referring to these rates in the Discussion section as well.

18. In the second paragraph, mindfulness and mindfulness-based smoking cessation treatments are introduced very briefly. We suggest adding more information describing current mindfulness-based smoking cessation treatments (and emphasizing that these are typically in-person and in group format). It would also be informative to briefly review some of the hypothesized mechanisms underlying effects of mindfulness on smoking cessation.

19. In the last sentence of the second paragraph, it appears that the word “than” is missing.

20. In the third paragraph of the Background section, please provide more details on Bricker et al.'s intervention, as it is the only known mindfulness-based smoking cessation intervention that has been delivered over the Internet. Please also provide the abstinence rate reported by Bricker and colleagues. Referring to this rate in the discussion section would also help readers to put the current results in perspective.

21. In the last paragraph of the Background section, a comma appears to be missing after the word “walking.”

MATERIALS AND METHODS

22. In section 2.4, the narrative switches between incomplete and complete sentences. This makes this section very difficult to read.
RESULTS

23. Do the authors have information on participants' income levels?

24. In section 3.1, the first sentence is incomplete. Perhaps “and” should be replaced by “were.”

25. Section 3.4 would read more clearly by indicating “MTSO participants demonstrated…” or “MTSO participants showed…” instead of “MTSO demonstrated” or “MTSO showed.”

DISCUSSION

26. In section 4.4, the first sentence should say “an important question to address… is” rather than “was.”

27. In the final two sentences of 4.4, negative affect and anxiety seem to be treated as the same or highly correlated without explanation. It is also unclear why this study found changes in anxiety but not depression or stress as assessed by the DASS.

28. The second sentence of 4.6 should say “to be used” instead of “to use.”

29. The fourth sentence of 4.6 appears to be missing the word “as.”

30. The last sentence of 4.5 reads: “Finally, the requirement of participants to have Internet access may have contributed to selection bias, for example by selecting participants more advantaged and thus more likely to be compliant and maintain abstinence.” This is a very important point, and the authors should be able to compare SES levels of those who enrolled versus did not enroll in MTSO to know whether those who enrolled did indeed tend to be more advantaged.

31. TABLE 2: Please make sure that the rows are properly lined up (e.g., “education” and “age” are currently not lined up with their respective numbers).

32. TABLE 3: Please clarify what the numbers 66 and 43 mean. Please also clarify how “completers” were defined.

DISCRETIONARY REVISIONS

BACKGROUND

33. At the outset of the manuscript, we suggest adding more background information on the prevalence of smoking and the need for smoking cessation interventions that can be disseminated more widely (especially for lower-SES smokers, who tend to have lower access to high-quality smoking cessation treatments). Adding this information would make a stronger case for why the current study has high potential public health impact.

34. In the last paragraph of the Background, the authors mention “addictive thoughts.” Please clarify exactly what is meant by this term.
MATERIALS AND METHODS

35. It seems that providing a 100-page manual may be a bit much for low-SES participants. Why was the entire manual included, and did participants read the manual?

RESULTS/DISCUSSION

36. Neither meditation nor patch use were associated with abstinence in this study. Could the authors provide some speculation as to why this might be?

SUMMARY OF REVIEW

In summary, the authors described a pilot study of a mindfulness-based smoking cessation program delivered over the Internet. Results support the feasibility of the program and suggest that mindfulness-based interventions for smoking cessation offered via Internet hold promise. The manuscript would be improved by addressing the above issues and could be an important contribution to literature on more cost-effective ways of delivering mindfulness-based interventions for smoking cessation.

Level of interest: An article of importance in its field

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.