Reviewer's report

Title: Assessing fidelity of delivery of smoking cessation behavioural support in practice.

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Reviewer: Judith Callan

Reviewer's report:

The authors of this manuscript have attempted to tackle an important issue that is often ignored and is, most likely, an important variable in treatment outcome. Additionally, they have tackled it in the smoking population who are well known to have many health sequellae. The following are points that I believe should be addressed or clarified before this manuscript is accepted:

1. The data is original and the question posed is important. I recommend the authors re-word objective 2 to increase clarity. I also recommend that adding an additional reviewer would strengthen the findings.

2. I am not sure the interpretation of findings is warranted. One of the major weaknesses of the manuscript is the lack of information as to what warrants acceptable fidelity for this treatment. They identify 43 separate behaviors that are part of the treatment taxonomy and both treatment sites had an average of 2/3 completion. For many treatments this may be good fidelity. A justification for their conclusion needs to be strengthened. Are all sessions required to have 100% of the BCTs?

3. Methods are relatively strong but there are some amendments that may further strengthen the report:
   - Why 2 reviewers? More info on who they were, how they were related to the project? Also clarify did the same reviewers who identified the taxonomy from the manuals also review the transcripts? This is unclear.
   - A better rationale for use of % agreement is required as Kappa tends to be the standard. Would avoid the term inter-rater reliability and use percent agreement, since reliability typically implies a more stringent test.
   - not sure if non BCTs is as interesting at this point, given the need for some of these process oriented actions to make a relationship with the client.
   - more info on how sample was obtained is needed and over what period of time
   - unclear why there cannot be some indication as to whether fidelity impacts outcome? Even if it is not the most powered analyses, I am not sure why there can't be some indication of the relationship in this sample

4. The following are issues of writing/organization that I believe may strengthen this manuscript:
- Since many non-British persons may read this study, it may be essential to provide greater description on this program, who conducts the sessions, how long are they, etc. Also, please define the three categories pre-quit, etc as they are confusing.

- Briefly describe the evidence base for this program, how do we know these 43 behaviors produces results?

- Use table to provide descriptive details for the persons providing and receiving the intervention including relevant details about their discipline, years education, etc. and for the smokers, relevant details about years smoking, etc.

- P5 is confusing. I was not aware that fidelity did not appraise quality of intervention.

- Again, it has to be clarified as to what the gold standard is for this particular intervention...is 100% required to produce results?

- Info on training on the manual is necessary. Are those that provide the intervention put through some sort of standardized training? Also, as manuals are written in house..how do we know they are written in a clear, manner?

- Rather than using the term average, be specific, is it the mean?

- Table 1 is not interesting and appears to be a data table rather than a synthesis of results. Table 2 (which is supplementary) is much more interesting and informative...why not use that?

- A general discussion of fidelity may not be as useful compared to the issue of the fidelity cut off for this treatment. I am not sure you can use these general guidelines for this particular treatment. Perhaps 2/3 fidelity is enough to produce a change?

- Further discussion on the limits to generalizability may be useful and a list of lessons learned" from this study for the reader.

- You hint at issue of treatment individualization. Please expand this discussion in relation to the issue of fidelity and non-BCT

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I have no competing interests