Author's response to reviews

Title: Factors influencing the effectiveness of multisource feedback in improving the professional practice of medical doctors: A systematic review

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Author's response to reviews: see over
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The authors would like to thank the reviewers for their in depth review of the manuscript MS: 6151596911578223 - Factors influencing the effectiveness of multisource feedback in improving the professional practice of medical practitioners: A systematic review. We appreciate the reviewers’ comments and have completed the revisions following their comments. A point-by-point response to the reviewer’s comments (in italics) is given below.

Petra Bywood

Minor essential revisions

1. Give specific numbers: Throughout the manuscript, the authors use terms such as “a number”, “some”, “the majority” of studies etc. It would be more helpful to the reader to indicate just how many studies (of the 16 reviewed) reported a particular finding.
   - Changes made – more specific terms now used,

2. Results: Impact of MSF on medical professionals’ professional practice. The Brinkman et al. RCT reported here as showing significant improvements in various behaviours also reports very wide confidence intervals for each of these behaviours. Thus the precision is poor, the findings are uncertain and more data are needed to make more definite statements about measures.
   - Have added the statement “Furthermore, the wide confidence intervals reported in this study means that these results need to be interpreted with caution and further research is therefore needed, to confirm the findings.”

3. Discussion. Strengths and limitations: “Applying Buckley et al’s quality criteria ensured that all included papers met a high standard”. This statement is somewhat misleading. It would be more accurate to say that Buckley’s quality criteria were used to eliminate the very poor quality studies. The next paragraph states that “most of the studies were conducted on small volunteer-based samples”, which is not really high standard of quality.
   - Have amended the sentence – now states “studies of very poor quality were eliminated”

4. Source of the feedback (1st paragraph): “A large minority of raters in this study …” This statement doesn’t really make sense (oxymoron?). It would be more useful to state how many or what proportion of raters etc.
   - Removed “A large minority” and added “nearly half the raters in the study”

5. Strengths and limitations (2nd paragraph): The fact that 5/16 articles examined the same sample population needs to be emphasised as it contributes to strong publication bias in favour of the intervention. Thus the statement in the following paragraph – “In fact, in this review the strongest evidence for improved performance …..” is based on findings from the same group of studies.
• Have added: “However, it should be noted that all three articles are from the same sample population and therefore publication bias may exist”

6. Table 7. Key findings: “negative comments may stimulate behavioural change” – add “except where comments are inconsistent with physicians’ own perceptions”
• Sentence now included.

Discretionary revisions
1. 1st paragraph in background: “A recent systematic review …”. Overeem et al. was published in 2007, which is not exactly ‘recent’.
• Now changed to “An earlier systematic review”

Renee Stalmeijer

The background in the abstract makes me assume that you will answer the question ‘does MSF work or not’, the title however suggest something different (more attention for factors that are assumed to make it work or not). In the results in the abstract mentions ‘acceptance and use of MSF’, but does acceptance imply behavioural change in itself?
• Have added in the aim of the review to the abstract to clarify things.

What would have been interesting to know as well is ‘what does MSF NOT do?’.
• While it would be interesting to know what does MSF not do, this was outwith the scope of the review.

Furthermore I feel that the concept of ‘competence’ is used rather loosely. It is a tricky concept and the focus of a lot of debate. What do the authors consider to be competence?
• The authors acknowledge that the concept of competence is difficult to define. The authors use the definition put forward by Epstein and Hubert (2002) “the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served” (p226). While the authors use the above definition of competence, however, they are unable to surmise the definition used by the authors of the studies included in the review.

Background

The first sentence already struck me. It states ‘medical practitioners are now professionally accountable for the standard of patient services they provide’. Were they not before??
• Have included “via periodic revalidation” to the first sentence.
There seems to be a (unintended) contradiction present within the background. First of all it is stated by the authors that many assessment approaches involve subjective judgments. However MSF is a collection of subjective judgments. Moreover the authors cite evidence that MSF was considered to be the most appropriate and practical method. I think it would be worthwhile diving into the literature surrounding subjectivity in performance based assessment and workplace assessment which are the basis for MSF. Many authors (Dijkstra et al, vd Vleuten et al, Berendonk et al) have come to conclude that a collection of subjective assessments to amount to a more objective assessment.

- Sentence added to address this, plus two relevant references.

the ‘recent systematic review of a diverse range of assessment methods’ you refer to is already 7 years old...
- Now changed to “An earlier systematic review”

Furthermore the addition of self-assessment to MSF procedures has a very clear (and proven) purpose which the authors do not elaborate upon. It would help the quality of their introduction if they did.

- The authors have been unable to locate any articles supporting the use of self-assessment in MSF. Have added in a reference supporting the statement “Many MSF tools also require participants to self-assess, by completing the questionnaire themselves as a means of comparing self and others’ perceptions of professional performance”

Methods
The first paragraph of the methods puzzles me. What was the intention with this paragraph? Furthermore I think that starting with the search strategy and key words used would be more appropriate.

- Methods section restructured: starting with search strategy and key words

In addition to that, although the Medline search is included in a table, a short description of the keywords used in-text would be preferred by me.

- Keywords now included

Although the authors display the use of the Buckley et al 2009 criteria list as a strength of the study, I have to partly disagree. When taking a closer look at the criteria it becomes clear that this list was designed for quantitative study designs. However the majority of the studies that ended up in the systematic review were mixed methods or qualitative. I feel that it would have been better if you had added a framework to assess the quality of the manuscripts which is more focused on qualitative methodology (e.g. Malterud 2001, Kuper et al 2009, Frambach et al 2013).

- The criteria put forward by Buckley et al 2009 was for use with both qualitative and quantitative studies and was used in a systematic review of workplace based assessment by Miller and Archer 2010 which included both qualitative, quantitative and mixed methods studies. It was therefore deemed appropriate to use with this current review.

Small detail, the lay-out removed some of the words in table 4 (Buckley criteria).
Results
There are some inconsistencies and unclear concepts in Table 6. Abbreviations for the various MSF tools are not explained. Format of feedback is inconsistently described (facilitator yes/no, confidential report yes/no, etc).
- Abbreviations for the tools now explained below the table
- Format of feedback column now split into 2 columns (feedback facilitated? and format of feedback)

The column describing changes identified holds some vague concepts that should be further defined.
- Concepts in table now defined and expanded upon, some of the results reported are now slightly changed to reflect this.

Contradiction on page 11 ‘a large minority of raters’…?
- Removed “A large minority” and added “nearly half the raters in the study”

p.13 What is considered ‘time to reflect’?
- Time to reflect, changed to “the process of reflecting”

The following sentence needs clarifying ‘whether the feedback received was used for learning and change’ # do you mean as opposed to used for appraisal and judgment?
- Changed to “learned from and used to change professional practice”

The finding that feedback needed to be facilitated to be effective is repeated quite often in the results and in the discussion. Overrepresentation of the findings? Future research agenda of the authors? In any case, it would help if the authors could elaborate on what characteristics of good facilitators are and who they should be.
- The characteristics of a good facilitator were not covered in any of the articles included in this review. Have added in a sentence regarding the impact of the facilitator “The facilitator was said to encourage reflection and subsequent acceptance of the feedback which in turn led to a change in behaviour” and included in the Recommendations for further research that an exploration into characteristics of a good facilitator

Discussion/Conclusion

How do the authors define ‘educational impact’? That would help interpret their discussion.
- Educational impact now defined

On p.14 the sentence ‘while a number of systematic reviews (...) behaviours of medical doctors’ needs some references to support the statement.
• References included

I like the fact that you contrast your findings with findings from a different domain. If you found more evidence from a different domain it would be good to add it.

• Included another review

Reference 43 is an odd reference to support the first described strength of the study.

• Reference amended

I feel that implications for practice and research should be part of the discussion, not the conclusion.

• Moved to the discussion section

Table 7 could be improved by indicating after each element which study from the review supported this element.

• Reference numbers added

With regard to the statement that it is unclear whether changes made are sustained over a longer period of time, the authors should also consider the difference between a ‘one-shot intervention’ and ‘prolonged exposure to MSF’.

• All the studies in the review were ‘one-shot interventions’, so it is therefore out with the scope of this review.