Reviewer's report

Title: Singing teaching as a therapy for chronic respiratory disease - a randomised controlled trial and qualitative evaluation

Version: 2 Date: 12 April 2010

Reviewer: Dianna Kenny

Reviewer's report:

1. Is the question posed by the authors well defined? YES
2. Are the methods appropriate and well described? YES
3. Are the data sound? YES
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? YES
5. Are the discussion and conclusions well balanced and adequately supported by the data? YES
6. Are limitations of the work clearly stated? YES
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? YES
8. Do the title and abstract accurately convey what has been found? YES
9. Is the writing acceptable? YES

- Major Compulsory Revisions

The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

I am suggesting these as major revisions because the amount of information provided with respect to the intervention is insufficient to allow a replication study to be performed. I would consider these issues essential to be discussed in the paper.

The singing intervention needs to be much more clearly described.

1. How many participants attended all the sessions?
2. What was the precise content of the singing lessons?
3. There is no mention that breathing exercises specific to singing were part of the singing intervention. If they were, give examples of breathing exercises used.
4. Also need examples of songs taught - how were these selected? Were songs presented in a graded way as the singing classes progressed? For example, did songs become progressively more challenging in terms of respiratory demand (via increases in pitch range, dynamic range and phrase length?)
5. Was any record kept of the amount of home practice undertaken by the
participants?

6. If there were no breathing exercises specifically taught in the singing lessons, this may be a reason for the lack of a significant improvement in the post test in the measures of breathing. Discuss

7. Would not measures of MIPS and MEPS provide more specific and accurate breathing outcome measures that those used?

8. Since depression is significantly associated with COPD, why was there not a measure of depression in the test protocol?

9. Response to these interventions can be highly variable. It would be instructive to analyse the results of each participant to ascertain how many of the singing group made substantial gains as a result of the intervention.

- Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

- Discretionary Revisions

These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

A section in the introduction should be devoted to the possible reasons as to why singing (and learning to sing) may be an efficacious adjunct therapy for COPD.

The possible effective mechanism for improvement in lung function following singing lesions is learning to use diaphragmatic breathing, the breathing technique that must be mastered in singing. Failure to include such a technique in the course of the singing lessons may have resulted in the nil effect for the breathing measures.

This field of research is new and it is important that early studies do not disadvantage singing as a possibly effective adjunctive therapy for people with respiratory distress because of the choice of outcome measures or inadequacies in the singing protocol.

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

**Quality of written English:** Acceptable

**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’