Reviewer's report

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

**Version:** 2  **Date:** 3 April 2010

**Reviewer:** José Martinez

**Reviewer's report:**

The article by Lord et al intends to investigate the effects of singing classes on quality of life and some functional parameters of patients with chronic respiratory disease, particularly COPD. In addition, eight patients, enrolled in the singing arm of the clinical trial, were evaluated by a psychologist regarding their feelings and opinions about this practice. Finally, additional qualitative surveys, by questionnaire, were performed in 150 patients with chronic respiratory conditions, invited to participate in open singing workshops.

The obtained results indicate that “Singing lessons improved anxiety and the physical component score of the SF-36, but did not improve measures of breathing control, functional exercise capacity or recovery time. Participants reported that they found the singing beneficial and reported positive changes in their physical ability and wellbeing.”

“Singing and chronic respiratory disease” is a very interesting and important matter, since it may have potential therapeutic implications for the care of COPD patients. However, this is only the third published paper to address the issue so far. The present data tend to confirm previously published results and to improve a little bit our knowledge about the topic.

**Major Revisions**

**Clinical trial:**

The strongest and more consistent data of the paper are those derived from the clinical trial.

The authors should to address the following points:

a) Did the authors perform an initial estimation of the sample size? Do the groups are big enough to adequately answer the proposed questions?

b) The authors assessed the control of breathing employing two different means: i) breath hold test and (ii) single breath counting. “Both techniques were in routine use in the physiotherapy department for the assessment of hyperventilation”. The authors should to introduce some bibliographic references that support the use of these tests in this setting. I do not think this a widespread accepted methodology, regularly employed in respiratory research.

c) The authors should to add information about the presence of blood gases
abnormalities in both groups of patients, reporting eventual needs for continuous oxygen therapy.
d) The authors could to explain in more details the procedures performed by the patients during the singing sessions (pages 6 and 7).

Evaluation of open singing workshops for respiratory patients:
a) The authors should to add information about the group of 150 subjects: age, gender and, most important, the type of respiratory diseases and disorders included.
b) Could the authors clarify the number of singing classes the patients had participated before answering the questionnaire?

Discussion:
The quality of the paper will improve if the authors could address the following issues in the Discussion:
a) How to explain the significant improvement of the breath hold time in the control group ?
b) How can we be sure that the observed improvements in anxiety and quality of life were due to singing and not due to the regular contact with health care professionals ? The previous paper of Bonilha et al. showed similar improvements of quality of life in patients submitted to singing training or handcraft artwork. The later paper would be better if it had included a third group without any intervention. However, the present paper would also be better if it had included a third group with some sham intervention happening in the hospital setting.
c) As the own authors recognized, singing was not associated to any measurable physiological improvement. It is feasible, therefore, that psychological effects are responsible for the improvements of quality of life and anxiety scores. If this is the case, how can we explain that the mental component of the SF-36 questionnaire did not show a significant difference between the groups ?
d) The SGRQ has been specifically designed to evaluate health related quality of life in CPOD. The SF-36 is a generic tool. How the authors explain the finding of a significant difference in quality of life for the SF-36 PCS and not for the SGRQ ?
e) The authors should to state and discuss in more details the methodological limitations of the present study.

Minor Revisions
a) Page 8: Results, Randomized Controlled Trial, third line: I think there is a concordance mistake: “…one was excluded as they were already involved in a study…”
b) Page 12, fourth line: “Bonilha et al” instead of “Bonhila et al”.

c) Reference 8: The format does not follow the recommendations of the Journal.

**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'