Reviewer's report

Title: Health-related quality of life varies in different respiratory disorders: a multi-case control population based study

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Reviewer: Sebastien Chanoine

Reviewer's report:

I carefully read the manuscript entitled "Health-related quality of life varies in different respiratory disorders: a multi-case control population based study" submitted to the BMC Pulmonary Medicine. This single centre study aimed to assess the relationship between HRQL and several respiratory diseases (i.e., COPD, asthma, chronic bronchitis, and rhinitis). Overall, the results showed a decrease in the quality of life in individuals with respiratory diseases compared to controls. Interestingly, the authors highlighted that not only the major respiratory disorders, but also the minor ones, have an impact on HRQL.

Major comments:

1. SF-36 questionnaire taps 8 health domains: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. It should be interesting to develop the results for each domain in a study focusing on HRQL.

2. How did the authors select the studied comorbidities? Why did they not include others disorders such as hormonal disturbances or cancers? Why did they study cardiovascular diseases alone (which did not include hypertension)?

3. One of the criteria of COPD definition was age> 35 years old. Why did the authors use this threshold and not 40 as usually?

4. The authors identified a co-occurrence of asthma and COPD in some individuals (n=21, including CA and PA). Is it potential misdiagnosis?

5. Moreover, asthma and COPD define ACO, which is a specific phenotype characterized by a higher severity than asthma or COPD alone, and so a potential poorer health perception. This group of individuals should be studied separately.
6. The authors did not discuss the limitations of the study:

6.a SF-36 questionnaire covers the previous 1 to 4 weeks and may vary over time. The authors did not discuss that point. Do they think that their results remain stable over time?

6.b The study relies on a small population from a single centre. We can question the generalizability of the results.

6.c Gender differences in health perceptions have been showed. Women may have a worse health perception than men. What is the impact of this gender differences on the results of the study? This should be discussed.

Minor comments:

1. The introduction section should be rewritten to avoid a list of diseases that have common characteristics.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

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