Author's response to reviews

Title: Assessment of the general public knowledge about rheumatic diseases: evidence from a Portuguese population-based survey

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Author's response to reviews: see over
Responses to Reviewers’ comments

We thank the Reviewers for the most valuable comments, which contributed to a substantial improvement in the quality of the paper. Please find below the authors’ responses addressing each of the reviewers’ comments.

Comments from Reviewer(s):

Reviewer’s report

Title: Assessment of the general public knowledge about rheumatic diseases: evidence from a Portuguese population-based survey

Version: 1 Date: 21 March 2010

Reviewer: Ivano Pereira

Reviewer’s report:

Minor Essential Revisions:

1- I suggest that abbreviations written in the abstract should be previously defined, such as resp

R: We reformulated the abstract according to the reviewer’s suggestion.

2- The results reported in abstract are difficult to understand. I think that authors could write the percentage of some important responses found in the questionnaire applied to this population.

R: We reformulated the abstract according to the reviewer’s suggestion, adding the mean percentage of correct answer of the items.

3- The methodology described in this paper is complex and need to be written with the idea that the majority of rheumatologists that will read this paper in this journal are not familiar with latent models.
R: We reformulated the methods in order to simplify.

“Latent variable models were used to identify the flaws in the overall knowledge about rheumatic diseases in the general population and to identify specific target groups.

In the present study, and given the binary structure of the data, two models were used: latent trait models (LTM) and latent class models (LCM).

LTM was used to identify dimensions in the overall knowledge about rheumatic diseases in the general population, thus indentifying what we considered to be knowledge flaws...

LCA was used to uncover heterogeneous groups of individuals, thereby identifying the target groups...”

4- Considering that as a rheumatologist, I do not know the correct answer of the question about glandular fever, I suggest that this question could be excluded.

R: The correct option was false. The idea behind this item was to put false disease with a familiar name to observe if the individuals gave a wrong answer. However, as stated in the results, this item was one of the excluded of the final model.

“...the inspection of marginal residuals revealed large pairwise residuals for four items (6, 10, 14 and 17) whose statement followed the structure “... is a kind of rheumatic disease.” The goodness-of-fit was improved after the elimination of those items...”

5- The authors should define in the paper what were considered correct answers for the questions.

R: We added to table 2 an indication of which option was the correct one.
6- The conclusions in abstract should not discuss the advantages of one statistical model, but the real conclusions based in the results found. Maybe could be: There are several gaps in the overall knowledge about rheumatic diseases in the general population. One out of four considered the false general beliefs as true and approximately 30% did not have detailed knowledge on rheumatic disease. Higher education and the presence of disease contributed positively to the overall knowledge. These results suggest some degree of effectiveness of patient education, either conducted by health professionals or self-driven.

R: As suggested, we replace the conclusion that discuss the advantage of the statistical by the one you suggested

7- There are some paragraphs in discussion that discuss methodology with much statistical details, and I think that in this part of the paper this could be summarized and easier to be understood. One of the examples is that: The poor fit and the poor internal consistency (alpha=0.628) of the 1-factor LTM was not unexpected. Even the 2-factor LTM (17 items) was not itself completely satisfactory: a careful inspection of the pairwise marginal residuals showed large discrepancies between the observed and expected frequencies for some pairs of items, namely for those whose statement followed the structure “... is a kind of rheumatic disease.” Only after the elimination of these four items the internal consistency improved (0.700 and 0.630 for LT1 and LT2, respectively).

R: We summarized the paragraphs to be understood: in the following way:

“The goodness-of-fit test suggest that the 2-factor LTM (13 items) was the best solution.”

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, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.
Reviewer's report

Title: Assessment of the general public knowledge about rheumatic diseases: evidence from a Portuguese population-based survey

Version: 1 Date: 6 April 2010

Reviewer: Cesar Ramos-Remus

Reviewer's report:

I reviewed manuscript entitled “assessment of the general public’s knowledge about rheumatic diseases: evidence from a Portuguese population-based Surrey, from Severo et al.

This is a cross-sectional population survey.

Major Compulsory Revisions,

a) The manuscript is difficult to follow. There is a mixture in the aims of the study, results and conclusions: This is a cross-sectional study, although individuals were identified during a previous unrelated cohort study. It is stated that the authors aimed to identify “the gaps in the overall knowledge about rheumatic diseases in the general population and to identify target groups for health education”, but methods section seems to assess internal consistency of the questionnaire, and no method were used to “identify the gaps” or “identify target groups.

R: We change according to your suggestion in order to clarify the methods that were used to “identity the knowledge gaps” or “indentify the target groups”:

“Latent variable models were used to identify the flaws in the overall knowledge about rheumatic diseases in the general population and to identify specific target groups.

In the present study, and given the binary structure of the data, two models were used: latent trait models (LTM) and latent class models (LCM).
LTM was used to identify dimensions in the overall knowledge about rheumatic diseases in the general population, thus indentifying what we considered to be knowledge flaws...

LCA was used to uncover heterogeneous groups of individuals, thereby identifying the target groups…”

b) Authors used a previously reported questionnaire constructed by others, in a foreign language. Please add information regarding cross-cultural adaptation to Portuguese, and its validation.

R: As suggested by the reviewer, we added to the method section, the information regarding the cross-cultural adaptation to Portuguese.

“Cultural validation of the Portuguese version of the scale followed the usual methodology. The first stage consisted of a forward translation completed by 2 independent professional translators, yielding 2 initial Portuguese versions. Translators then synthesized the 2 versions to create a consensus version. Afterwards, 2 different independent translators completed a backward translation. Finally, an expert committee reviewed and compared the final Portuguese translation and the back translations to obtain a final version of the scale.”

c) 32% of the participant individuals self-reported a rheumatic disease. The authors mix results from these rheumatic patients –that have already information from a physician- with individuals from general population. It biases their results.

R: The objective of this study was to identify the knowledge gaps in the overall knowledge about rheumatic diseases in the general population and to the
identification of target groups for health education, considering this objective we cannot exclude the individuals with rheumatic disease because they are a subgroup of the general population. If we exclude the rheumatic patients, would not fulfilled this aim, and the results would reflect the knowledge in individuals without rheumatic diseases instead of the general population. However table 3 shows the effect of age, education and sex independently of the presence rheumatic disease, showing the effect of these variables excluding the effect of rheumatic disease.

d) This study cannot “confirmed that it is important that educational programs...are centred in the eldest and low educated...” (page 7, paragraph5, line7)

R: The reviewer is absolute right, we cannot confirmed that it is important that educational programs are centred on the eldest and low educated with our results. We replace this by the following phrase.

“Although we did not measure the effectiveness of patient education, these results suggest some degree of effectiveness of patient education, either conducted by health professionals or self-driven.

c) The authors do not acknowledge limits, biases and confounders of their study.

R: We added the major limitations of the study:

“There are a number of limitations to this study. First, this sample of the study was significantly older and had higher frequency of women when compared with census counts for the city of Porto, which could lead to a selection bias. However we have tried to minimize this by estimating the age and sex standardized prevalence of latent classes. Additionally, we used only a pool of 13 items to indentify knowledge flaws and targets groups in the overall knowledge about rheumatic diseases. This is somehow
limited, as the moderated alpha shows, considering that we are trying to measure a multi-dimensional concept, with a multitude of possible items.”

f) The authors missed important information on education. It seems that the authors do not acknowledge differences between information, learning, knowledge, beliefs, and interpretative structures. The authors should read Lorig K articles on this regards, or Ramos-Remus et al. (How important is patient education? Baillieres Best Pract Res Clin Rheumatol. 2000 Dec;14(4):689-703.) to enrich their discussion.

R: We tried to enrich the discussion using the reviewer suggestion.

“The effectiveness of futures educational programs about rheumatic diseases directed to general population/patient population might be improved by targeting the eldest and low educated fraction of the population to counteract wrong general beliefs. As reported in other studies education is not one programme, but a strategy that is tailored to each population, the programme should remodel the interpretative structures of individuals because providing educational information, by itself, has no beneficial impact…”

Minor essential revisions:

a) English language needs improvement in the entire manuscript

R: We asked a person fluent in English to improve the style of written English.

b) Please review each reference for typo errors (e.g. Brekke rather than Berkke in reference 2) and modify journal’s name (eg. Arthritis Rheum or Arthritis & Rheumatism, rather than “Arthritis and rheumatism”.) and book references.
R: We correct the typo errors of the references.

c) Please modify SD to ± rather than “=” if you use two tailed SD

R: As suggested by the reviewer we changed to ±.

d) Please find another word for “gaps”

R: The expression that we wanted to use was “knowledge gaps” and made to abbreviation to “gaps”. However we replace the word “gaps” as suggested by “flaws”.

e) Table 1 can be improved

R: To improve we organize the table in qualitative and quantitative variables showing respectively n (%) and mean±SD

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests' below