Reviewer's report

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

Version: 2 Date: 10 August 2010

Reviewer: Tim Croudace

Reviewer's report:

As methodological referee I can confirm that the methods applied to the data are appropriate and the conclusions reached are reasonable.

I have only minor suggestions on the manuscript (listed below).

Major Compulsory Revisions

Please consider plotting the latent class allocations in a 2-D space/plot of the latent trait scores. There should be a clear relationship visible that might help clinical readers.

Please state the actual libraries and commands used to estimate the models in R with full references to the packages. Citing the Bartholomew books is not enough.

Minor Essential Revisions

Please alter the sentence in the abstract that reads "... completed a questionnaire that included questions ...", replacing the word questions with "general knowledge items about rheumatic diseases".

Please clarify why you have chosen class 2 as the reference in your multinomial logistic regression. Please also state that you have obtained these ORs from MNLR, and not an ordinal regression, which seems more appropriate given your ordered classes (perhaps).

Declare the MNLR as the source of the ORs in the abstract as well please.

Could you include the 2-class LCA solution in your table of results too. The LCA results could appear to the left of the statements perhaps, with 2 class , then 3 class. Please order the LCA-3 solution with 1st, 2nd then 3rd class, not 2-3-1!

Please confirm the estimation method, and also the method of allocation of individuals to classes (MAP?).

Perhaps you could include a Kuder Richardson reliability coefficient calculated for each Latent Trait? KR20 is appropriate for binary data, and more appropriate than alpha.

Did you mean to include the last result in the Abstract since the OR CI does not exclude 1?
Discretionary Revisions
I think you are studying level of common knowledge and incorrect beliefs; I prefer this wording to the use of "flaws". Would you consider changing this throughout?

Delete "the overall" in the second paragraph of the Statistical analysis section.
There is a typo "indentifying" in this section too.

Latent should not be capitalised (in the last para of the Discussion).

Some of the journal titles in your references should retain capitals I think e.g. Arthritis and Rheumatisim not rheumatism, and Journal not journal etc.

It might help your readers to say that LTM is simply Binary Data Factor Analysis, and that you considered one and two factors.

The acknowledgement should probably read "We thank the reviewers for THEIR most valuable comments..." not the most valuable comments.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

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