Author's response to reviews

Title: Factor Analysis of Common Somatic Symptoms: A Preliminary Study

Authors:

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Author's response to reviews: see over
Dear Ms Pafitis,

Thank you for your review of our manuscript and for the valuable and constructive comments of the reviewers. We have revised the manuscript based on their comments and are pleased to be resubmitting our work. As requested, below we have included the reviewer comments and our point-by-point responses.

We look forward to your continued correspondence.

Sincerely:

Dr Tsai.

Point-by-point responses to reviewer comments

Reviewer's report #1

1. Is the question posed by the authors well defined?
A well articulated research question is lacking. However, by their introduction the Authors suggest that they are interested in the way somatic symptoms cluster together, which may be indicative for somatisation disorder.

Author Response: The specific aim of the present study is to investigate the clustering of the somatic symptoms, not to study somatisation disorder. Therefore, we did not specifically discuss somatisation disorder in great detail. In this study, we used factor analysis to evaluate 22 common symptoms and created 4 symptom categories seen in primary care patients. The clustering of some somatic symptoms suggests that when patients have one somatic symptom, other symptoms in the same cluster should also be evaluated. We have attempted to clarify these points in the manuscript.
2. Are the methods appropriate and well described?

638 individuals are included who attended a one-day physical examination. Symptoms of these individuals are assessed by questionnaire. The quintessential feature of somatisation disorder is the frequent attendance and help seeking for medical reasons, where a physical explanation for the disorder is lacking.

In this study patients are not attending a doctor for help seeking reasons, but for a general health check, therefore, the critical characteristic of help seeking without a medical reason is lacking. Secondly: patients are seen once, the number of symptoms is not assessed (or at least not reported) therefore the critical characteristic of frequency and abundance of symptoms is lacking as well. Thirdly: The possible physical explanation for the symptoms is not considered. What remains is a trivial inventory of symptoms that ordinarily cluster together in the general population, an exercise that has been performed many times before.

**Author Response:** The specific aim of the present study is to investigate the clustering of the somatic symptoms, not to study the somatization disorder. Therefore, we believe it is appropriate to investigate common symptoms among the individuals who attended a one-day physical examination. Individuals were asked to complete interviews that recorded demographic and symptom information, a physical examination, and associated testing.

Since we were looking for the clustering of the symptom, the critical characteristic of frequency and abundance of symptoms would beyond our objective. The clustering of some somatic symptoms suggests that when patients have one somatic symptom, other symptoms in the same cluster should also be evaluated. We believe this descriptive analysis of common somatic symptoms may provide a reference point for medical personnel to use when evaluating patients with multiple complaints. This topic may have been investigated many times before, but we have verified the clustering of symptoms using factor analysis. We have clarified these points in the manuscript.

3 Are the data sound?

Factor analysis of the data produced 4 factors, suggesting clustering around the Themes !°pain!±,!°cold!±,cardiopulmonary!±!°gastrointestinal!±. It is finding in population epidemiological research that these are the most common factors, one may find.

**Author Response:** Very few studies in the literature have actually looked for the clustering of common symptoms. With the exception of differences in a few symptoms, the 4 factors described were comparable to those identified in other foreign and domestic studies. David et al., for example, classified the common
symptoms into 5 major categories, and 3 of them were very similar to the findings in our study. Both our study and David’s study are not investigating the incidence or prevalence of the diseases. I don’t think our study belongs to population epidemiological research, and our finding would not be found using population epidemiological research methods.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The discussion is completely about somatisation disorder where the data cannot learn us anything about somatisation disorder.

Author Response: We have removed information in the Introduction and Discussion regarding somatization disorder, as the focus of the study was the clustering of somatic symptoms, not somatization disorder.

6. Are limitations of the work clearly stated?

No, see the already mentioned objections.

Author Response: I do not consider the points mentioned in comment #2 limitations of the study. The limitations of the study have been described in Discussion section. The data are only from a single medical center in central Taiwan, and thus the results may not be applicable to other patient populations. Also, the study did not include a measure for depression and anxiety. That measure was beyond the scope of this work. The critical characteristics of frequency and abundance of symptoms were beyond our objective in this study; however, the severity of the disease may affect the structure of clustering, which should be included in the future study. We have clarified the limitations in the last paragraph of the Discussion.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

Yes, but they are building upon work on somatisation disorder while their data are about common symptoms in an open population.

Author Response: Very few studies in the literature actually looked for the clustering of common symptoms. We have removed information in the Introduction and Discussion regarding somatization disorder, as the focus of the study was the clustering of somatic symptoms, not somatization disorder.

8. Do the title and abstract accurately convey what has been found?
The title is correct. But the content overrules the title.

Author Response: We have revised the title of the manuscript to better reflect the content of the paper.
Major Compulsory Revisions:
A straightforward research question should be added. This research question cannot relate to somatisation disorder, for the data do not allow any conclusion about somatisation order for the reasons stated above. The paper should be restricted to conclusions about symptoms, clustering together more than expected by coincidence.

Author Response: Both the Introduction and Discussion has been revised to focus on the clustering of common symptoms.

Discretionary revisions:
Table1: These characteristics are not taken into consideration in the rest of the article, except for gender. Mentioning their distribution makes only when these distributions of the patients involved are compared with e.g. national data, allowing for conclusions about generalization of the results. If reference data about acertain variable (e.g. religion) are not available, the results about the distribution of the variable can be omitted, because these data are not used in the article.

Author Response: Table 1 was used to describe the characteristics of study population; it is not used to generalize the results of this study. Therefore, we did not revise Table 1 in the revised manuscript.

Table2: is difficult to read. Readability would be increased if for instance only a percentage "agree" was presented.

Author Response: Table 2 has been modified. Please see updated Table 2.

Reviewer's report #2
Based on a rudimentary factor analysis (FA) of symptoms presented by 683 patients who received a one-day physical examination and completed a structured interview, 4 symptoms were identified:1) pain symptoms, 2) cold symptoms, 3) cardiopulmonary symptoms, and 4) gastrointestinal symptoms. The distribution of symptoms differed between males and females.

The result is of some interest to those interested in the structure of somatic symptoms cross-culturally and by gender. The FA while rudimentary is competently done, although a three-mode FA may have been more appropriate given gender based differences.

Author Response: The descriptions related to differences in results of FA between males and females have been modified. Please see the updated result section.