Author's response to reviews

Title: Assessing positive mental health in people with chronic physical health problems: correlations with socio-demographic variables and physical health status

Authors:

Teresa Lluch (tlluch@ub.edu)
Montserrat Puig (monpuigllob@ub.edu)
Aurelia Sánchez (elisanchez@ono.es)
Juan Roldán (jroldan@santjoandedeu.edu.es)
Carmen Ferré (carme.ferre@urv.cat)
Positive Mental Health Research Group PMH-Research Group (mariateresa5969@gmail.com)

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Author's response to reviews: see over
Cover letter

Dear Editor

Please find attached the reviewed manuscript entitled *Assessing positive mental health in people with chronic physical health problems: correlations with socio-demographic variables and physical health status.*

Thank you very much for your comments on our manuscript. We have modified the text to incorporate all the points raised by the reviewers.

Below we list each of the changes we have introduced.

**Review 1: Dolors Juvinya Phd**

**Minor Essential Revisions:**

Pag. 1, the word "E-mail" should be used at the same way.

We have unified the use of the word e-mail in the same way

Pag. 2, delete coma at the paragraph beginning by "Results" between "differed" and "either"

We have deleted coma at the paragraph beginning by "Results" between "differed" and "either"

Pag. 4, first paragraph "emotional an(s)d spiritual", second paragraph, line 12, traduce "la resilencia"

In first paragraph "emotional an(s)d spiritual" we have repaired and in the second paragraph, line 12, we have translated the concept “la resilencia” / “resilience”

Pag 5, second paragraph "5)... respect for culture(a)" ... and "A(a)sian population"

in the second paragraph we have changed "5)... respect for culture(a)" ... and "A(a)sian population"

Pag 6, second paragraph, grammatical mistake "cooccurrence"

We have repaired the grammatical mistake “cooccurrence”

Phrase starting by "but" delete "however"
We have deleted “however” in the Phrase starting by "but"

Last phrase: substitute the word "chronic problems" by "chronic diseases". We suggest to use "chronic disease" as at the "Methods" section it refers to the "ICD-9". That is frequent at different parts of the text.

At the last phrase we have substituted the word "chronic problems" by "chronic diseases" and also we have substituted in all the parts of the text that appear “physical problems” or “chronic problems” by the suggested concern “disease”.

Pag 10, second paragraph, space between (15.5) and "either"
in the second paragraph, we have corrected the space between (15.5) and "either"

Pag 12, last paragraph, substitute "2100" by "2010"
last paragraph, we have substituted "2100" by "2010"

Pag 24, Table 1, F2 "active predisposition towards society". The word "the social" lacks of meaning.
Table 1, F2 "active predisposition towards society". We are in agreement with the Dr. Juvinya. In this phrase the word "the social"lacks of meaning. We have eliminated.

Pag 28, Table 5, translate"Si"
Table 5, we have translated "Si" for “Yes”. And We’ve done a better table design.

**Review 2: Anne Gadermann**
The topic is certainly of great interest, but there are several major limitations of this research, most of all the limited sample size, insufficient information about the validity of the main measure, and lack of a matched sample of the general population in order to draw the conclusions the authors do.

We have attempted to address the limitations that the reviewer mentions. We now explicitly mention the small sample size and the lack of an equivalent
general population sample in the discussion, limitations and conclusions, and the conclusions have been adapted taking these limitations into account, as Dr. Gadermann suggests. Regarding the insufficient information about the validity of the main measure, we have now expanded our discussion of its development and validation (Positive Mental Health Questionnaire).

*Minor Essential Revisions* (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct). There are quite a few typos and grammatical inconsistencies. Also, sometimes Spanish words are used (e.g., virtudes, la resiliencia on page 4 or ‘si’ ‘no’ in Table 5).

We have corrected the spelling errors and grammatical inconsistencies noted by both reviewers and the missing labels on figures and the Spanish words.

*Major Compulsory Revisions*

*Introduction:* The introduction needs tightening, especially the part about PMH as a concept vs. construct. It would be helpful for the reader if the authors provide a clear definition of the terms concept and construct (e.g., construct a la Cronbach and Meehl?). It is unclear to me how this distinction can be seen in the use of, for example, the WEMWBS vs. a subscale of the SF-36.

We have changed the wording because the difference between concept and construct did not correspond exactly to what we wanted to say. Thank you for pointing this out.

In fact we have removed the discussion of concept and construct and have introduced complementary explanations such as the study by Cowen and Kilmer (2002), which reinforces the idea that there are many positively worded scales with positive constructs (for example WEMWBS) but they do not address positive mental health as a construct. We think that Lehtinen, Sholman & Kovess-Masfety (2005) expressed the idea well: “Happiness or life satisfaction are necessarily not the same as positive mental health, although they can be seen as essential components of the construct”. In addition, following the
suggestions of the reviewer we have introduced Cronbach and Meehl’s definition of construct which may help to clarify the idea.

The PMHQ is introduced on page 6. Given that this is the main measure of interest, and as many readers will likely not have access to the references provided (theses and Spanish articles), it would be necessary to provide more information on the development and validation of the measure (in the introduction and or methods section). The only reference I was able to access is the ‘Decalogue of Positive Mental Health’, which is a commendable list of recommendations, but does not provide any research findings, so I am not sure how this has shown "good applicability” of the measure.

In the introduction and in the methods section we provide more information on the development and validation of the PMHQ.

We have changed the poorly-expressed sentence “has been shown to have good applicability”. The Decalogue was developed to apply the concept of positive mental health to specific areas, but no attempt is made to assess its applicability. The sentence has been changed as follows:"A decalogue of practical recommendations has also been designed to show how the theory (the conceptual model proposed)can be applied in everyday life: What can be done to enhance / reinforce positive mental health?"

**Methods:** What is the time frame of the PMHQ? What were the sample sizes for the validation of the PMHQ? What was the time-period for test-retest correlation?

We now describe in detail the psychometric characteristics of the PMHQ and its development.

**Results:** I would recommend including a factor analysis in this sample to cross-validate the factor structure. Also, Cronbach’s alphas need to be reported for this data set.

We have included the Cronbach's alphas for the PMHQ as a whole and for the six specific factors, and data on the Principal Components Analysis (PCA).

What was the % of participants with hypertension?
We have included the % of participants with hypertension

Rather than solely focusing on statistical significance, it would be worthwhile to discuss magnitude of effect sizes.

This comment is very interesting. We computed the magnitude of the effect size of the results of PMH on Hypertension (Table 5), and we discuss the results in the different sections (results, discussion and conclusions).

The correlations in Table 5 are incorrectly labeled.

The correlations are now properly labeled.

It is interesting that number of chronic health conditions are only significantly associated with F5—did the authors use continuous scores for these variables or only looked at levels?

We use continuous scores.

Discussion: The authors state: “Overall, there was no chronic health condition that produced significant differences in the level of PMH reported by patients with and without the condition, which suggests that having a chronic health condition does not in itself influence the degree of PMH.” It is not clear to me how this can be concluded given that all participants have a chronic health condition. Rather, there were no differences with regard to the type of health condition participants had. I would suggest that the authors use a matched sample (with regard to age, etc.) of the general population in order to examine whether having a chronic health condition or not is associated with PMH. Furthermore, the causal language seems inappropriate (especially given the correlational nature of the study).

We fully agree with Dr. Gadermann’s suggestions. We believe that the changes we have introduced reflect adequately the discussion and conclusions.

The first part of the sentence is correct (“there was no chronic health condition that produced significant differences in the level of PMH reported by patients with and without the condition”) but the second part should read “this might
suggest that having a particular chronic health problem (as opposed to any other) does not affect the level of PMH).”

We have highlighted the need for studies with larger samples and samples from the general population that do not have chronic health problems. We have revised the language as well so as not to indicate any causal relationship because, as Dr. Gadermann rightly says, the nature of the study is correlational and not causal.

It would have been of interest to have information on time since diagnosis of disease and/or disease activity (currently active, in remission, etc.).

This would indeed be very interesting, but this information was not recorded in the medical record. The health service records vary in terms of their comprehensiveness, and many medical histories are not complete due to patients’ changes of residence, etc. An electronic medical record system is currently being introduced in Spain which will be able to provide standardized data. In the near future we will be able to study these data in new samples.

We hope that we have dealt satisfactorily with the points raised. We would like to thank the reviewers once again for their comments.

Sincerely

Teresa Lluch