Author's response to reviews

Title: The Healthy Lifestyle and Personal Control Questionnaire (HLPCQ): A novel tool for assessing self-empowerment.

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Author's response to reviews: see over
Dear Victorino Silvestre,

We are sending you today our answers to referees' comments. We would like to inform you that we had our manuscript copyedited by a native English speaker scientist. Changes in the manuscript have been marked with red color.

Best wishes,

Darviri Christina (prof.)

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Answers to the referees

Referee 1

Q1.

1) Consider removing or replacing the text in first paragraph up until; To date, numerous....". In my opinion the text before this sentence is a little bit out of context or at least starts up the paper from a very wide angle.

Answer

We have deleted the text. Thank you.

Q2.

2) This study would benefit from a more comprehensive, critical review of current measures used (which the authors evaluate as inadequate to detect lifestyle changes). By reviewing these measures and how the proposed novel tool will fill in the gaps, the authors would build a stronger case for the need for developing this new measurement tool.

Answer

There is a considerable number of empowerment measures, thus a comprehensive critical review of all these would need a separate systematic review manuscript. We have moved a paragraph from the discussion part to the introduction that addresses your comment (please also see answer to Q9 and revised text). We have to note that the word "inadequate" does not refer to empowerment measures but to the measures used in the studies conducted by our team. As presented in the introduction, this new questionnaire was not designed to fill in the gaps of any previous similar questionnaire but to address changes that are achieved by stress management and health promotion programs, which are indicative of a stronger internal health locus of control and less stress. That's the reason why we have briefly discussed these two entities in the 2nd paragraph(formerly 3rd) of the introduction in respect of their capability to reflect the level of someone's health.
empowerment. Thus HLC and stress served us as the main validity measures. Please also see the method section and the first paragraph of the discussion part; I quote: Our main goal for this questionnaire was to detect and quantify lifestyle changes or patterns that are achieved through stress relief and a more internal health locus of control in addition to identifying a healthy lifestyle. As such, validation is based upon these two characteristics,..." and "In the absence of a similar questionnaire, validation was based on measures of perceived stress and health locus of control. As presented in the results section, perceived stress and internal HLC were significantly correlated with all the aforementioned subscales and the total score, which also indicates that a high HLPCQ score adequately reflects the lifestyle pattern of a self-efficacious, empowered individual.

Q3.

3) The authors' rationale behind the development of this new tool derives from their own experience within stress management research, suggesting that current measures or measures utilized in their previous research have not been adequate to detect changes in lifestyle. However, this part of the introduction should be more elaborate, clearly defining the authors' previous qualitative findings that suggest that stress management/health promotion interventions lead to changes in lifestyle that cannot be adequately measured by current quantitative measures.

Answer

Thank you for the opportunity to elaborate more on this issue. Our published interventions were evaluated mainly with structured questionnaires. However, at the end of the intervention time we were always asking the participants about changes that took place during the intervention period in respect of their everyday lifestyle. The open question used was: "During the previous weeks, have you noticed any changes concerning your everyday living/lifestyle?". There were 26 different answers that are actually the items of the HLPCQ questionnaire. We have added the above explanation in the revised manuscript (methods section).

Q4.

4) The introduction is built on one main theme; measures used today to assess the degree of change in lifestyle in response to an intervention, are not adequate to capture the potential efficacy of that intervention. However, considering the methodology of the study, the authors are not really able to answer whether or not this new tool will be more adequate than current tools (to detect change over time). This is mainly due to two reasons. First, the new tool is not being tested with an actual sample exposed to an intervention (e.g. pre-post testing of the tool). Two, this new tool is not compared to current tools in order to evaluate whether or not they differ in their diagnostic sensitivity.
Firstly, as stated in the answer of Q2, "inadequate" does not refer to pertinent to HLPCQ questionnaires. We have clarified it more in the manuscript (see last paragraph of the introduction). The essence of our study is reflected in the last two sentences of the introduction; I quote: "The aim of this study is to examine the psychometric properties of this tool. Cross-validation (criterion validity) of this instrument was based primarily on perceived stress and health locus of control (representing empowerment) questionnaires." It is clear that our aim was not to compare measures. Introduction mainly describes the source of the 21 items of HLPCQ, rather than the gap of similar measures. Health locus of control, stress scales etc used in our study are not considered similar to HLPCQ measures. In other words, we created HLPCQ because during our interventions we noticed additional to the main studies' endpoints (measured with structured questionnaires) beneficial lifestyle changes, which were recognized with the open question of "During the previous weeks, have you noticed any changes concerning your everyday living/lifestyle?". Thus, I hope it is now clear that exposing a sample to an intervention or comparing to another "inadequate" similar measure is irrelevant to this study's main aim. Please see the revised introduction and the 2nd paragraph of the methods section, further clarifying the study's aim.

Q5.

5) Why did the authors not perform a test-retest reliability assessment? Also, considering that the main theme in the introduction was stress management programs and the issue of measuring their efficacy on changing individual's lifestyle, would it not have been optimal to assign individuals to these programs in order evaluate the new tool's adequacy compared to current ones.

Answer

The value of test-retest reliability is fully recognized. For practical issues we did not perform this assessment. We have added this to the limitations part (see revised manuscript). With regards to the last comment of yours, you should refer to answer to Q4 and I hope this is now clear that this was not the study's aim.

Q6.

6) The test construction process should be explained in more detail along with some supporting evidence or rationale for the inclusion/formulation of items.

Answer

Please see answer to Q3 and revised text. Thank you once again for your successful comment and the opportunity to elaborate more.
Q7.

7) For the sleep quality measure; why was not a validated sleep quality scale utilized?

Answer

Due to the lack of short and well-validated sleep measurements in Greece. However, there is one, the Pittsburgh Sleep Quality Index, which is validated, but it is not short and it is mainly used for clinical purposes.

Q8.

8) Maybe the authors could explain the reasoning behind the inclusion of SRRS in the analyses, and possible reasons why it did not associate significantly with any of the subscales?

Answer

SRRS refers to the environmental approach of stress, while the PSS refers to perceived stress (psychological approach of stress). Thus we included SRRS for the sake of completeness (please see the theory of stress; 3 approaches.Measurements: environmental, psychological and biological in "Measuring Stress: A Guide for Health and Social Scientists" by Sheldon Cohen, Ronald C. Kessler and Lynn Underwood Gordon. An explanation was added to the revised text: "The lack of correlation of HLPCQ with SRRS most likely reflects the inability of an environmental approach of stress (i.e. the occurrence of stressors) to reflect the true stress experienced by the individual (perceived stress), since SRRS obviates the cognitive appraisal of the stressors by the individual."

Q9.

9) There are important aspects mentioned in the discussion that should have been introduced in the introduction (see also comments 10 and 11). For example in the first sentence in discussion the authors formulate the aim of the study in a different (perhaps more suitable) manner than was previously done in the introduction. Here the authors are not presenting the aim as to develop a more adequate measure to assess lifestyle change in response to an intervention (the efficacy of an intervention), rather merely to:

"...evaluate the psychometric properties of a novel questionnaire that examines several dimensions of daily living."

Answer
Please see answer to Q4. We have revised the introduction in order to clarify the study's aim.

Q10.

10) Paragraph starting from row 262, "The novel idea behind this tool is...", contains important aspects that may support the rationale behind the study and should thus be presented already in the introduction.

Answer

We have followed your suggestion. Please see revised text.

Q11.

11) Furthermore starting from row 318, “A novel idea of the HLPCQ is Daily Routine (DR).”, a vital aspect which should be presented already in the introduction along with supporting evidence of the importance of this novel idea.

Answer

Daily routine was derived by the PCA and it was a new finding for us. The introduction, in general, describes the rationale behind the study, before we knew everything about the results. You must also consider that the 26 items were derived after including all (without exceptions) the participants' answers from previous studies (please see answer to Q3, as such we were not biased for any particular HLPCQ construct at the beginning of the study.

Q12.

12) Due to the methodology of the study, the authors’ conclusion “The HLPCQ is a good tool for assessing the efficacy of future health-promoting interventions to improve individuals' lifestyle and wellbeing.”, is beyond the findings of this paper. In order to conclude that the measure is an adequate tool and should be used by researchers, more elaborate analyses should be made (e.g. confirmatory factor analysis, optimally implemented through structural equation modelling). Also, in order to design a measure that is aimed for assessing change (over time) in an outcome in response to an intervention, the validation study needs to include individuals who actually were exposed to an intervention.

Answer

Please reconsider the conclusion paragraph. You are referring to a suggestion stated in the last sentence. HLPCQ was designed as an assessment tool and can be used in all type of
studies, including interventions. I hope you have amended your opinion about the study's aim (revision have been made for this purpose). CFA is surely valuable but I disagree that is extremely necessary in order to allow a researcher to use HLPCQ. Your comment about "assessing change...intervention" has been hopefully addressed.

Thank you for your useful comments.

Q13.

Minor Essential Revisions

Tables

13) I would suggest that the authors follow APA-style formatting when designing tables (labels and notes should not be inside the table, do not use vertical lines etc.)

Row 88 (second sentence in the paragraph) seems like something is missing from this sentence:

"...stress management programs in different of the population..."

Answer

I think that formatting will be done by the journal.

"different subsets of the population". Thank you for noticing.

Referee 2

Major Revisions

Q1.

1. Abstract, Paragraph 1 & Methods, Paragraph 2 & Discussion, Paragraph 1: Deriving 26 items of the HLPCQ from the "qualitative data of several stress management programs" needs more explanations.

Answer

Thank you for the opportunity to elaborate more. Please see modified manuscript (introduction and methods). I quote the process of eliciting these items " As stated above, items were derived from our experience with stress management/health promotion interventions used in different study populations. In the end of each intervention program we were asking participants about lifestyle changes that they have noticed during the previous weeks, using the following open question: "During the previous weeks, have you noticed any changes concerning your everyday living/lifestyle?". The 26 items presented in the HLPCQ questionnaire are the result of gathering all the qualitative data from the participants'
answers to the aforementioned open question. All answers without exceptions were grouped and rephrased to keep the initial participant’s meaning." I hope this is helpful.

Q2.

2. Discussion, Paragraph 5 & Methods Paragraph 1: Since “the generalization of the results is hampered by the sampling method” and the subjects do not represent target population, why were “postgraduate medical school students and their friends and/or relatives” asked to participate in the study?

Answer

This was a convenience sample, frequently used in studies investigating the psychometric properties of instruments. We have included this in the limitations.

Q3.

3. What about examining the face validity of the tool?

Answer

Unfortunately this was not examined.

Minor Revisions

Q1.

1. The Title: Since the article does not examine the capability of the tool to assess “the efficacy of stress management and health promotion interventions” but its psychometric properties, it is proposed that the title of the paper be changed.

Answer

You are absolutely right. We have change the title to "The Healthy Lifestyle and Personal Control Questionnaire (HLPCQ): A novel tool for assessing self-empowerment."
Q2.

2. Background, Paragraph 1: Since “physical exercise” and “sleeping quality” are not health related “risk factors”, it seems that the sentence “To date, numerous …” needs some changes.

Answer

We have changed "risk factors" to "lifestyle factors".

Q3.

3. Methods, Paragraph 1: What does the word “valid” mean in the sentence “Finally, 285 participants delivered a completed and valid questionnaire”?

Answer

We have changed the sentence to "a completed questionnaire". Our intention with the word "valid" was to explain that questionnaires with problems, for example, missing pages, were excluded. Thank you.

Q4.

4. Methods, Paragraph 3: Why has “marital status” been classified as “married/unmarried”?

Answer

I think these are the main categories of marital status. Please provide some suggestions.

Q5.


Answer

Tertiary education in Greece means a number of education years above 12. Secondary denotes 6-12 years. We have clarified it more in the revised manuscript.
Q6.

6. Methods, Paragraph 3 & Results, Paragraph 1 & Discussion, Paragraph 4: Concerning the variable “presence of disease”, some participants have reported diagnosed diseases by their physicians. What about the kind and severity of the diagnosed diseases? And can we consider that it is likely that some participants have had undiagnosed disease and disorders? The answers “may” clarify why “the presence of disease was not correlated with HLPCO”.

Answer

We cannot answer the above questions because, as stated in the method, no interview took place. Still if this was the case, the severity of each disease cannot be deduced so easily. For example if a student had multiple sclerosis, EDSS would be the most appropriate way to assess severity, which is decided only by physicians. Secondly, ascertaining undiagnosed diseases needs an extensive medical service to be delivered, which of course was impossible. Please see interpretation in the 3rd paragraph of the discussion.

Q7.

7. It seems the explanations mentioned on five factors (discussion, Paragraph 1) are more related to the “results” section.

Answer

Paragraph 1 summarizes the "results" section. I am not sure I understand your comment. Please clarify.