Reviewer's report

Title: Physical and mental health issues for adolescents transitioning to university life

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Reviewer: Fernando Vázquez

Reviewer's report:

Review of BMC Public Health (MS: 3402670258364588): ‘Physical and mental health issues for adolescents transitioning to university life’.

This manuscript examines physical and mental health issues for first year university students. It provides interesting data on the main physical and mental health problems and concerns in this significant period of adult life. The question of the study is well defined. However, there are some main issues that limit the potential impact of this manuscript. The first major limitation is related to the structure of the article; it could benefit from further clarification and restructuring, especially in the results and discussion sections. Another major concern is related to the design and method’s section; a statistical analysis section should be added and some issues regarding the validity of the measure should be stated. Finally, the article would strongly benefit from a deeper literature review and comment, particularly on the discussion section.

Major Compulsory Revisions

Abstract:
- The abstract does not accurately convey what has been found. Clarification regarding sociodemographics (sex (% male), medium age (SD)), measurement instruments, and concrete results should be added to the abstract. Conclusions are not relevant to this work.

Background:
- Background needs restructuring. The structure is confusing, as it mixes concrete data from other studies and rationale for the importance of the study without a fixed structure. Also, prevalences of psychological conditions (depression, stress, sleep problems, concerns) are described when talking about physical health. Structure could benefit from: Describing physical health problems- its consequences-previous studies; describing psychological health problems-its consequences-previous studies, or a similar structure, but data appear mixed and unclear.
- On the second paragraph, the fact that health and wellbeing of university students is largely missing from mainstream public health research is stated. However, there is a good amount on literature on health and wellbeing within this population group, as later stated on the third paragraph.
Methods:
- The sample is not accurately described. Data concerning sociodemographic variables should be added. What was the University? A table with sociodemographic characteristics of the sample would be strongly recommended.

- Survey instrument: There is considerable concern regarding the validity of the instruments, as the authors state that they have modified the ASQ items to enhance relevance to the current study population. Data regarding the psychometric properties for this instrument and specific alfa for this population are strongly recommended.

- Data analysis: A data analysis section should be included in the methods section.

- Results: I wonder about the utility of the instrument for this study, as many of the items described are not included in these data. Also, academic conduct is not supposed to be an aim of this study, I also wonder about the need of a specific section for describing this item. There is again a problem when conceptualizing physical health, should depression or anxiety be considered a physical health problem, as they are conceptualized as mental disorders by DSM-IV-TR? In the mental health section, analytic strategies appear mixture with new variables (for example, analysis by sex), this analysis need to be explained in the analysis section, and justified in the introduction, as it doesn’t seem to be a reason for this analysis at this point.

Fatigue section, second paragraph: Correlation analysis cannot inform about causality, so the explanation of factors contributing to fatigue is not accurate. Odds ratio should be provided for multiple regression analysis.

- Discussion: The discussion section would benefit from a deeper literature review regarding the main findings of this article. Explanation on previous studies should be extended, avoiding materials specific to the introduction (e.g., first paragraph, “This is of concern due to the immediate impact”. Also, specific conclusions should be reconsidered: Physical ill-health was found to impact academic performance. How do the authors conclude this? If there are data about this, these data should be reflected in the results section.

Depression and anxiety are considered physical illnesses in the results, but then psychological problems in the discussion. This should be made homogeneous. Information from previous studies regarding psychological health in university students should be added in this discussion section.

Table 2: Sum for all possible answers is not 100% for all items, review these data.

Minor Essential Revisions

Abstract:

Typo: Last sentence, “effecting”.
Background:
Typo: Awkward phrasing: “University students studied had experienced”.
- Review decimal numbers: authors provide none, one or two decimal numbers interchangeably, make it homogeneus.

Results:
- Typo: space after F for describing ANOVA results “F (1, 354)”. The same for correlations.
- Review where to insert table 3, as it seems to be inserted in two different places.

Discretionary Revisions

Background: Rationale regarding the definition of young people could be removed, as it seems out of the focus of this article.

On the second paragraph, concrete data regarding the proportion of young people constituted by university students would be welcome.

Methods:

Survey instrument: It would be useful to present the whole instrument in an appendix, after it has been changed, and removed all this exhaustive explanation from the text.

Results: In case a table with the sociodemographic profile is provided, these data could be removed from the text, making it more understandable.

- Results: Given the extensive nature of the data, I would recommend to include most of the information in tables, and remove it from the text, as it’s difficult to follow, especially when data not mentioned elsewhere are provided without percents (for example, in the physical health section, attributions for poor health were provided, but no percents nor specific data were available, confusing the reader)

- I would recommend to remove some phrasing from the text (for example, physical health, last sentence: “I think the main issue…”, and also the last sentence from mental health: “University has its up and down…”. It might not be very informative and makes this section unclear.

- As it’s one of the aims of this study, a table for describing access to medical and support services would be strongly recommended.

- Limitations section: This section could be expanded to add the lack of confidence in the psychometric instrument, and the utility to include longitudinal data.

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

**Quality of written English:** Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

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