

Peer Review Report

Review Report on The Impact of the COVID-19 Pandemic on Depressive Symptoms in China: A Longitudinal, Population-based Study

Original Article, Int J Public Health

Reviewer: Reviewer 2

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EVALUATION

Q 1 Please summarize the main findings of the study.

Dear Dr. Lindert,

thank you very much for give me the opportunity to review this paper. The research seems useful but I think there are some issues that need to be addressed. I explain below (Q3) in more details my thoughts. I selected major revision. For my point of view, the paper need a lot of work to arrive to more clear and useful results.

Main findings: Association between incidence of COVID-19 and mental health. High incidence is associate with poor mental health.

Q 2 Please highlight the limitations and strengths.

There are statistical analysis limitations. The paper shows a lot of results. A more clear definition of objectives, methods and more concise results is better. The approach used to measure the exposure to covid is innovative and the analysis consider data from two waves (prepandemic and during pandemic) using representative samples with large size.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

The research seems useful but I think there are some issues that need to be addressed. I explain below in more details my thoughts after reading the paper:

Introduction

- The contribution of the research must be better justified with respect to previously carried out studies. The authors state that they are carrying out a study of changes in trajectories in mental health, but this objective is not clearly reflected in its design and results.
- I believe is more clear if the authors could focus their objective/results in explore "change" in mental health. They could have selected individuals with "low depressive symptoms" (or "good mental health") prior to the pandemic (using the 2018 survey) and asses their change in mental health to "high depressive symptoms" (or "poor mental health") during the pandemic (2022 survey) In addition, they can include selected individuals with "high depressive symptoms" in 2018 and explore their changes in 2022 mental health (please, see for instance, Robert G et al 2014). Are these the analyses reported in figure 1 Panel B? I think that knowing Panel B results by other covariates (and changes in covariates groups) could be very useful and improve the paper results.
- A more detail is need about the conceptual model which can change mental health. What is the rationale to include covariates of table 1 in the analysis?
- Some parts of the last paragraph should be included in methods section

Methods

- For my point of view, CES-D is the only outcome although authors analyze it as continuous covariate or categorical (score greater than or equal 8). Of course, the two analyses can be applied depending on the goal. In the case of applying the cut-off of 8, authors can arrive to a useful interpretation. They can obtain prevalence of “high depressive symptoms”. A table showing this results overall and by covariates will be useful. There are not studies that validate the cut-off 8?
- To obtain the main explanatory covariate the province of resident of the individual was consider. As I can understand, for instance, for 7-day period incidence, individuals living in the same province can have different 7-day incidence, because the incidence is related with the interview date for that individual. Is this understanding true? A clarification is needed.
- I believe interpretation of the results using incidence rate as continuous covariate is difficult. Does the authors explore to create groups of risk (for instances quintiles) depending on the incidence rate -from low incidence group to high incidence group? Does they explore linearity in incidence rate in the models?
- Does authors adjust for changes between 2018 and 2022 in the other explanatory covariates?
- Province is an important covariate, but is not described the number of provinces authors are analyzing. A exploratory analyses (maybe using maps) with prevalence of “high depressive symptoms” could be useful to explore and quantify changes in mental health between 2018 and 2022).
- The authors included the province as fixed effect in the model. Why they consider standard errors clustered at the province level? I suggest to review the works from Schempf AH (2012) and Basagaña X (2018). From these reviews they can thing if the could include province as a fixed effect or included as random effects.
- The authors stated that they are using a representative sample. Are sample weights included in the analyses?

Results

- The incidence rates values seems very low. Could the authors review the calculation?
- As I pointed out a more detailed analyses of Panel B could improve the paper results and usefulness of the research.

Discussion

- The authors should talk about reverse causality. Although they can use 2018 mental health status value in the same individuals, 2022 mental health status can be present before the covid pandemic.

References

- 1.Robert G, Martínez JM, García AM, Benavides FG, Ronda, E. From the boom to the crisis: changes in employment conditions of immigrants in Spain and their effects on mental health Eur J Public Health 2014 Jun;24(3):404-9.
- 2.Schempf AH, Kaufman JS. Accounting for context in studies of health inequalities: a review and comparison of analytic approaches. Annals of Epidemiology 22 (2012) 683e690
- 3.Basagaña X, Pedersen M, Barrera-Gómez J, et al. Analysis of multicentre epidemiological studies: contrasting fixed or random effects modelling and meta-analysis. International Journal of Epidemiology, 2018, 1343-1354.

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes, it is.

Q 5 Are the keywords appropriate?

Yes, they are.

Q 6 Is the English language of sufficient quality?

Yes, it is.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

It is need more references to justify the conceptual model.

QUALITY ASSESSMENT

Q 9 Originality

Q 10 Rigor

Q 11 Significance to the field

Q 12 Interest to a general audience

Q 13 Quality of the writing

Q 14 Overall scientific quality of the study

REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Major revisions.