LETTER OF REVIEWERS

Reviewer B:
Recommendation: Revisions Required

Relevance: Moderated
Novelty: Moderated
Presentation and writing: Moderated

Comments for authors:

TITLE AND ABSTRACT
1. I suggest removing the year from the title and explicitly indicating that this is a cross-sectional study. For example: "Life satisfaction and perceived overload as predictors of mental health in caregivers of psychiatric patients in the Peruvian Andes: A cross-sectional study."
2. The abstract should be structured into Introduction, Objective, Method, Results, and Conclusion.

INTRODUCTION
3. The conceptual mechanisms explaining why life satisfaction should be associated with mental health are not clearly articulated. Moreover, it is unclear why only these variables were selected, or whether other relevant variables, such as quality of life, were omitted. Clarifying this rationale would strengthen the manuscript and justify the authors' choices. Presenting a directed acyclic graph (DAG) could help conceptualize this problem and identify potential confounders and mediators.
4. I suggest adding a paragraph explicitly addressing "evidence before this study," "added value," and "implications." This would facilitate a clearer understanding of the novelty and contribution of the study.

METHOD
5. The internal consistency of the instruments should be reported for the current sample, ideally including both ω and α.
6. The analysis plan is not sufficiently clear. It appears inconsistent to assume non-normality of the data and apply Spearman correlations, while subsequently using multiple linear regression and stating that assumptions were met. This should be formally evaluated, and the regression analyses should be reconsidered or replaced with models appropriate for non-normal data.

RESULTS
7. In Table 3, "Patient disorder" and "Relationship with the patient" are included as predictors, but their coding is not specified (e.g., dummy variables, ordering, reference category). This is critical, as the conclusions regarding education ($\beta = 0.223$) depend on how ordinal variables were handled.
8. I suggest reporting beta coefficients with only two decimal places, given that the sample size does not justify a higher level of precision.
9. In the descriptive section, missingness and distribution by clinical groups should be reported. Although sociodemographic characteristics and diagnoses are presented (e.g., schizophrenia 38.2%, ASD 37.3%), the percentage of missing data per variable and the strategy for handling missingness are not described. In addition, basic comparisons of outcomes and predictors by diagnosis should be provided, at least descriptively and ideally using non-parametric tests or confidence intervals.
10. Correlation analyses should be expanded to include confidence intervals, and causal interpretations should be avoided. The correlation between life satisfaction and MHI-5 is moderate ($\rho = 0.535$). Reporting 95% confidence intervals for correlations would be desirable, and expressions such as "greater… lower… or vice versa" should be avoided.
11. The linear regression analyses should be reanalyzed, considering models that explicitly accommodate non-normality of the data.

DISCUSSION

12. The manuscript concludes by referring to "impact" and "predictive capacity." It should be emphasized that the findings reflect adjusted associations derived from a cross-sectional design, with the possibility of residual confounding.

13. In the limitations section, I recommend adding potential selection bias related to recruitment through CMHCs, the lack of measurement of patient severity and objective caregiver burden (e.g., actual caregiving hours, functional dependence), and possible cultural or linguistic bias of the instruments if no specific adaptations were made for the Andean context.

Interacciones seeks greater transparency in the review process and to provide credit to reviewers. If the editors decide to accept the manuscript, would you like your name to appear as a reviewer of the article?
No

RESPONSE LETTER

Dear Editor,

Please find attached the revised version of our manuscript as well as in the Interacciones webpage. We have addressed every comment made by the reviewers to improve the methodological rigor and clarity of the study.

As requested, we list below the specific changes made and their exact location in the text:

TITLE AND ABSTRACT

Comment 1 (Title): We removed the year and explicitly added the design to the title. It now reads: "...A cross-sectional study."
Location: Title Page, page 1

Comment 2 (Abstract): We restructured the abstract into Introduction, Objective, Method, Results, and Conclusion. We also updated the results to reflect the new bootstrapping and hierarchical analysis.
Location: Abstract Section, Page 1

INTRODUCTION

Comment 3 (DAG and Concepts): We included a theoretical Directed Acyclic Graph (DAG) as Figure 1 to clarify the variable selection and hypothesized relationships. We added text explaining the parsimony of choosing Life Satisfaction over broader constructs.
Location: Introduction Section, last 2 paragraphs, and Figure 1, on page 5 and 6

Comment 4 (Added Value): We added a specific paragraph addressing "evidence before," "added value," and "implications" to highlight the study's contribution.
Location: Introduction Section, final paragraph before Objectives on page 6

METHOD

Comment 5 (Internal Consistency): We now report both Cronbach's alpha (α) and McDonald's omega (ω) for all instruments (SWLS, Zarit, MHI-5).
Location: Methods Section, "Instruments" subsection, on page 9

Comment 6 (Analysis Plan): We rewrote the analysis plan. Even tho theres no violation of the normality of the residues, to address the inconsistency regarding normality of the data, we explicitly state that we used Hierarchical Linear Regression with Bootstrapping (5000 samples), which is now appropriate for our non-parametric data.
Location: Methods Section, "Data Analysis" paragraph, on page 10 and results, on page 14

RESULTS

Comment 7 (Coding): We specified that categorical variables were transformed into dummy variables. We explicitly stated that "Higher Education" and "Schizophrenia" serve as the reference categories.
Location: Methods Section, "Data Analysis" paragraph on page 10, and Note in Table 4 page 15

Comment 8 (Decimals): We adjusted the reporting of beta coefficients to use appropriate decimal precision in the text and tables.
Location: Results Section, Table 4, page 15

Comment 9 (Missingness and Groups): We reported that there were no missing values (0%). We also added a Kruskal-Wallis analysis to compare outcomes by diagnosis (Schizophrenia, ASD, Others), finding no significant differences in mental health.

Location: Results Section, first and second paragraphs on page 11.

Comment 10 (Correlations): We added 95% Confidence Intervals to the correlation matrix in Table 2.
Location: Results Section, Table 2 on page 13

Comment 11 (Regression Re-analysis): We re-ran the regression models using Bootstrapping (BCa). The updated results, including the change in significance for "Overload," are now presented.
Location: Results Section, Table 4 and Paragraph describing Model 2 on page 15

DISCUSSION

Comment 12 (Causal Language): We removed terms like "impact" or "prediction" and replaced them with "adjusted associations" or "incremental explanatory contribution" to align with the cross-sectional design.
Location: Discussion Section, first paragraph and Conclusion on page 16, 17 and 19.

Comment 13 (Limitations): We added the suggested limitations: selection bias (intra-hospital), and potential cultural bias.
Location: Discussion Section, "Limitations" paragraph on page 16.

We believe these revisions fully address the reviewer's concerns. We are very grateful for the detailed feedback provided, which has helped us tremendously to improve our research and statistics skills, and so have made some changes of our own, we decided to develop our study into a Hierarchical Multiple Regression and believe to be taking the right steps. Regardless of the final publication decision, and if it's not too much trouble, we'd love to read any further remarks or insights you may have.

Sincerely,

Jorge Antonio Calderon Apaza,
correspondence author.