# **Peer Review Report**

# Review Report on Mental multimorbidity among generalpopulation adults: sex-specific sociodemographic profiles of anxiety, insomnia, and eating disorders Text word count: 2,576

Original Article, Int J Public Health

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## **EVALUATION**

## Q 1 Please summarize the main findings of the study.

This is an interesting study that examined the prevalence and sociodemographic profiles of mental multimorbidity among adults in the general population, focusing on anxiety, insomnia, and eating disorders. Using data from the French NutriNet-Santé cohort, which included a large number of participants, men and women were divided into eight groups based on their mental health status. The study found that 40.6% of participants had at least one mental disorder, and 2.3% had all three disorders (anxiety, insomnia, and eating disorders). Women were more likely than men to have these conditions, especially multimorbidity. The study identified specific sociodemographic profiles associated with each mental health condition and their combinations.

# Q 2 Please highlight the limitations and strengths.

#### Strengths:

- 1. Large Sample Size: The study used a large, representative sample from the NutriNet-Santé cohort, enhancing the generalizability of the findings.
- 2. Comprehensive Analysis: The study considered multiple mental health conditions and their combinations, providing a detailed picture of mental multimorbidity.
- 3. Sex-Specific Analysis: By analyzing data separately for men and women, the study highlighted important sex-specific differences in mental health profiles.

#### Limitations:

- 1. Cross-Sectional Design: The study's design does not allow for causal inferences. It only provides a snapshot of the associations at a single point in time.
- 2. Self-Reported Data: The reliance on self-reported questionnaires may introduce bias and affect the accuracy of the data.
- 3. Lack of Longitudinal Data: It is said data is extracted from the cohort database. It's true that cohort studies typically involve repeated measurements over time, but this particular analysis used a cross-sectional snapshot from the cohort data. The study does not track changes in mental health status over time, which would be valuable for understanding the dynamics of mental multimorbidity.
- 4. Broad Categories: The study grouped different types of eating disorders together, which may obscure important differences between specific eating disorders.

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.

Major Comments:

- -Cautious Language: Ensure that the language used in the manuscript is cautious when interpreting results. It is important that statements reflect the cross-sectional nature of the analysis and do not imply causality without the support of a longitudinal design.
- -Acknowledgment of Limitations: Strengthen the limitations section to highlight the implications of the crosssectional design and the self-reported nature of the data. This will help contextualize the findings and manage reader expectations.

## Methodology:

- -The cross-sectional design limits the ability to draw causal conclusions. Future studies should consider a longitudinal approach to better understand the temporal relationships between the conditions.
- -The use of self-reported data is a potential source of bias that should be acknowledged in the manuscript. Including objective measures or validation of self-reported data could strengthen the findings.

## Results Interpretation:

- -The study provides a comprehensive analysis of the prevalence and sociodemographic profiles of mental multimorbidity. However, the discussion could benefit from a deeper exploration of the potential mechanisms underlying the observed associations.
- -The authors should consider the implications of the findings for public health interventions and policy development more explicitly.

#### Statistical Analysis:

-The use of Chi-squared tests is appropriate for the descriptive analysis. However, additional multivariate analyses could help identify independent predictors of mental multimorbidity.

#### Minor Comments:

### Clarity and Readability:

- -Some sections of the manuscript, particularly the methods and results, are dense and could benefit from clearer subheadings and more concise language.
- -The abstract is well-structured, but the language could be simplified to enhance accessibility for a broader audience.

#### Figures and Tables:

- -The quality of the figures and tables is satisfactory. However, additional visual aids, such as graphs or charts, could help illustrate key findings more effectively.
- -Ensure that all tables and figures are clearly labeled and referenced in the text.

## References:

-The reference list is comprehensive and covers relevant literature adequately. However, ensuring the inclusion of the most recent studies in the field would further strengthen the manuscript (if there is any).

## PLEASE COMMENT

Is the title appropriate, concise, attractive? Q 4

Yes

Q 5 Are the keywords appropriate?

Yes

# Is the English language of sufficient quality?

The English language quality is generally good, but some sections could benefit from minor grammatical improvements and simplification for better readability.

Yes.						
Q 8	Does the reference list cover the relevant l	terature adequa	itely and	d in an unb	iased m	anner?)
Yes						
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:

Minor revisions.