Reviewers report

Title: Health-related productivity losses increase when the health condition is co-morbid with psychological distress: findings from a large cross-sectional sample of working Australians.

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Reviewer: Nathalie Janssen

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This is a large-scale cross-sectional study. It includes an assessment of the impact of a variety of health conditions on productivity loss in terms of absenteeism and presenteeism. The impact of a particular health condition on productivity losses was assessed with and without co-morbid psychological distress.

Please find below some major and minor comments that may be considered to improve the manuscript.

Major Compulsory Revisions
- Abstract / discussion: No conclusions can be derived from the results of this cross-sectional study on causal pathways, including mediation. The last sentence of the abstract about potential mediation should be removed as this is inadequately supported by the study design / results. Also, the last paragraph of the discussion and conclusions should be more carefully-worded.

- Methods: It is unclear how exactly absenteeism was measured, i.e. what was the exact formulation, number of items? Furthermore, the categories of the outcome of absenteeism are not clear. How was the total number of absenteeism days dichotomized in the logistic regression?

- Discussion: I miss a discussion of the study strengths (e.g. sample size) and limitations (e.g. potential selection bias, common method variance, generalizability).

Minor essential revisions
- The terms medical conditions, chronic diseases, disease, health status and health condition are used interchangeably in the manuscript. If these refer to the same concept, I would prefer to see them replaced by a single, univocal term. Health condition seems to match best here.

- Methods: The authors mention that the HPQ that was used in the present study contains 28 health conditions. The present study however only contains a selection. Substantiation of this selection is lacking.

- Methods: Reference and substantiation of the cut-off on the K6 scale are lacking.

- Methods: A substantiation of the covariates is lacking. Furthermore, it is
mentioned that covariates were included in models if significant in bivariate analyses. However, information is lacking on which covariates were significant and therefore included in the multivariate regression models.

- Methods: Twice is mentioned in the text that the models adjusted for the number of comorbid conditions (under the heading of statistical analyses and under study measures, amongst the other covariates). This raises the question whether this particular covariate is always included in the multivariate analyses or only if found significant in bivariate analyses?

- Methods: the last paragraph of the methods section is unclear. I think this can be simplified. Also make sure that the text is in accordance with the table legends. Furthermore, only the reference category for the analysis of the impact of health conditions with comorbid psychological distress is described, not for the analysis of the impact of a health condition without comorbid psychological distress. Or, if the reference categories are the same for both analyses, this should be explicitly mentioned in the text.

- Results / under the heading presenteeism: Refer to table 4, and later on to table 5. Regarding the sentence: ‘Conditions with greatest effect sizes when co-morbid with PD were injury (IRR: 9.46 CI: 7.47-11.99), fatigue, D&A, arthritis, back/neck pain, diabetes, and COPD.’: Add obesity to this list.

- Tables 2-5: confidence intervals refer to 95% confidence intervals?
- Discussion: I miss a discussion on the implications of the study results for health priorities in occupational health care.

- Tables 2-5: The prevalence rates that are mentioned in tables 2-5 are not mentioned in the text. These could be used in the discussion about health priorities.

Discretionary Revisions
- Background: Second paragraph is redundant here as the focus of the study is on comorbid psychological distress only.
- Results: The authors could consider to report on the variety in mean absenteeism and presenteeism scores across health conditions?

**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.