Reviewer's 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.

Version: 1 Date: 29 September 2010

Reviewer: James Hill

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Major Compulsory Revisions

1. Absenteeism is known to be cyclic in nature. Since surveys were collected from Oct 2004 to Dec 2005, this would represent 5 business quarters. This is of concern for absenteeism reporting as 1) employers experience higher or lower rates of absenteeism over the national summer holiday season depending on societal norms and 2) lower rates of absenteeism prior to paid holidays, with the exception of Nov-Dec holidays (such as Thanksgiving, Xmas, and New Year’s holiday’s in the U.S. where employees can “build” a month off by taking a few, selected vacation and sick days. Seasonal variations may also play a role (ex. poor air quality days and asthma exacerbation) which is also a concern when having various reporting times of a short observation period. Lack of data/sensitivity analysis to address this issue-and the authors’ failure to recognize this (or other limitations of their data given cross-section data) reduces my enthusiasm for the manuscript.

2. While numerous covariates are identified in the methods section (ex. “Other covariates included in the model were:” ) the authors then reports that only covariates significant in the bivariate analysis were included in the adjusted model. I am unclear what variables are in the final model. Additionally, it is possible that the absenteeism model and the presenteeism model contain different sets of covariates-making comparisons between predictors of absenteeism and presenteeism problematic.

3. There appears to be no measure of diagnosed mental health conditions included in the analysis. I am certain that non-specific psychological distress (what the K6 sub-scale measures) would be co-liner with major depressive disorder, anxiety disorder, ect (other Axis 1 disorders). However, if I read your reference group correctly for co-morbid psychological distress it reads as follows:

   a. Reference group: no indexed health condition AND no co-morbid psychological distress (and other health conditions)

   b. Has indexed condition but NO psychological distress (and other health conditions)

   c. Has indexed condition AND psychological distress (and other health conditions).

Since Major Depressive Disorder is not an indexed condition (per the Tables and
Methods), your reference group contains both subjects with diagnosed Axis 1 and 2 disorders as well as people with psychological illness only (excluded indexed medical conditions). But in the introduction you cite a reference that over 30% of Australians present to their primary provider with a diagnosable mental disorder (which by definition is not non-specific psychological stress as measured by the K6). This makes it difficult to interpret the IRR/HRR. A person with arthritis and psychological distress has a 40% higher risk of absenteeism compared to a person with major depressive disorder/psychological stress but who does not have arthritis? At this point, the only mental health condition you have adjusted for is drug/ETOH abuse. Is this acceptable given the high prevalence of depression? Furthermore, unipolar depression is diagnosed twice as much in women compared to men – your sample is 65% women. At this point I am rambling so I will simply re-state – I am not comfortable with the treatment of co-existing mental health conditions in your analysis. I would also strongly caution that you avoid using “co-morbid mental disorders” “depression” and “psychological distress” interchangeably. One, they are not interchangeable and two-more important- you have not measured depression only non-specific psychological distress (using the K6) so it is unclear why most of your discussion talks about depression and productivity loss.

Minor Essential Revisions

The background section could be better organized. I think the information presented is relevant, just hard for this reader to follow. I would also add some specific numbers in the background section, rather than generalization such as “greater proportion of productivity loss” – just tell the reader how much. This is also true in the abstract- phrases such as “greater risk to productivity” and “much greater” do not provide information to the reader.

Discretionary Revisions

Intentionally left blank

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

**Quality of written English:** Needs some language corrections before being published

**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 interest