Reviewer's report

Title: Short-term Sick Leave and Future Risk of Sickness Absence and Unemployment - the Impact of Health Status

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Reviewer: Harald Reiso

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This is an article with a potential of shortening and focusing on main findings for increased clarity.

In the version I printed and read, Methods were on page 9 and out – after conclusion. As recommended?

Some literature focus on medical disorders and sickness absence – literature that is not mentioned in this paper (see works of an Oslo-based research group – by Tellnes G, Brage S, Reiso H)

Major Compulsory Revisions:

Sick leave reflect underlying health problems. It is difficult to grasp the abstract’s notification of: Studies have found sick leave to be a predictor of future sick leave, unemployment and disability pension. However, few studies have been aimed at disentangling the effect of sick leave and of the underlying illness.

Does the paper answer its aim?:

In the present study we aim to explore whether short-term sick leave (STSL) increases the risk of future long-term sick leave, disability pension, and unemployment. Furthermore, we aim to explore the impact of different measures of health status on the associations.

Abstract:
What is an disentangling effect?
Define Health status in abstract (and main paper).
In results: No increased OR (of what?) were found…

Main paper, Introduction:
What is meant by: However, we have not found any study of short-term sick leave taking the underlying health conditions into account. (what about works of Tellnes G, Brage S, Reiso H?)
Disentangle?: Although sick leave often is assumed to have consequences beyond the consequences of the underlying ill health, few studies have attempted to disentangle these two.
Furthermore, both those with high and low STSL had a lower prevalence of disability pension in 2007 than those with no short-term sick leave. (How is that to be interpreted/explained?).

About Table 3: Meaning?: Short-term sick leave appeared to have a gradient effect on the risk of long-term sick leave.

Out: After adjustments for confounding a decreased odds ratio, however not statistically significant, was found for both long-term unemployment (OR 0.56 (95% 0.26-1.18) and disability pension (OR 0.74 95% 0.42-1.33).

Discussion page 5: Out/Move to method?: The study population consisted of employed and self-employed (?) persons without long-term sickness absence and in-patient care during the year before the survey.

Out: An increased risk of short-term unemployment, however not statistically significant after adjustment for confounders, was found. Furthermore, the results indicated a decreased, rather than increased, odds of long-term unemployment and disability pension, although not statistically significant. Using measures of education or household income instead of socioeconomic status did not change the results (data not shown).

Meaning? terminated (?): These studies showed that frequent short-term absence was a predictor for later long-term sickness absence [16] and that sickness absence of more than 15 days per year was a risk factor of terminated (?) employment, mainly resulting in unemployment.[

Out: In our study, we found an increased risk of long-term sick leave and a suggested association with short-term unemployment, which was however not statistically significant after adjustment for all measures of health status. None of these previous studies had the possibility to control for health status.

Out: In 2004, seven studies of consequences of sick leave were scrutinized in a systematic review,[27] but none of the included studies had controlled for ill health (???). In 2009, an attempt to separate the consequences of sick leave from those of ill health was done using self-reports on consequences of sick leave, specifically requesting the respondent to separate these from the consequences of disease/illness.[26] Despite the attempts, there was some uncertainty regarding to what degree the consequences could be attributed to sick leave.

Page 8, meaning/explain?: One weakness in our study is the lack of register data on exposure.

Why/explain more: In this study, those with chronic or severe disease, recognized by long-term sick leave, in-patient care, or disability pension the year before the short-term absence, were excluded from the study group.

Out or rewrite: Through which mechanisms short-term sick leave affect long-term
sick leave and possibly unemployment, and possible mediators between short-term and long-term sick leave remains for future studies to explore.

Conclusion, Rewrite. What are the key elements here? Leave out the term sickness absence. You write: The results points to the importance of paying attention to short-term sick leave in order to prevent subsequent sickness absence. Even after adjusting for several measures of health status, short-term sick leave increased the odds ratio for future long-term sick leave.

Better?: The results points to the importance of paying attention to short-term sick leave in order to prevent subsequent long-term sick leave.

Try to make an health status index of the different health status measures? Explain why this measure was used: Somatic disease was a combined measure including five diseases available in the survey questions about whether the respondent ever had been diagnosed for any of these by a physician; diabetes, angina pectoris, myocardial infarction, heart failure or cerebral haemorrhage.

What is tested when p is noted in table 1? Plain text can describe the essence of the table.

The same is mainly the case for Table 2. No tests performed concerning table 2?

Simplify Table 3 by “collapsing” the 2 elements of unemployment.

**Level of interest:** An article of importance in its field

**Quality of written English:** Not suitable for publication unless extensively edited

**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.