Reviewer’s report

Title: Sense of Coherence as a Predictor of Incident Depression among Japanese Workers: A cohort study

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Reviewer: Tarja Välimäki

Reviewer’s report:

Sense of coherence as a predictor of incident depression among Japanese workers: a cohort study

This study investigates of very interesting topic. It has however some serious problems and a major revision is needed before publication can be recommended.

1. In the background the literature review is insufficient. Sense of coherence and its relation with perceived health, well-being, and depressive symptoms are well documented in previous literature. For example, Eriksson’s PhD thesis includes sound evidence of sense of coherence and the relation with health. See: Eriksson & Lindström 2006, J Epidemiol Community Health; Kivimäki et al., 2000 BMJ Public Health discusses of predictive validity of SOC. Also Henje Blom et al. 2010, Health Qual Life Outcomes. There are also several other relevant studies.

The introduction text should be extended and more clearly describe all the variables/concepts which are included in the analyses. The end point of the study “onset of depression” is not discussed at all in the background. The sick leave on the medical records need to described more in detail concerning diagnostics of depression. The reader wonders if depressions was self reported by the workers or were there some diagnostic criteria used? Further knowledge is needed about the severity of depression. As far as this reviewer understands depressive feelings and major depression are totally different situations.

The research questions need to be stated in the introduction section.

2. The reasons for this analysis method remains unclear. There is one major problem in the validity of this study concerning the scale. Why Antonovsky’s scale was not used? The 13-item and 29-item scales are valid and could be translated in Japanese. This scale is translated in several languages so far. Now the discussion with previous findings is somehow difficult.

3. Table 1 shows characteristics of participant according total SOC in low and high categories. There should also be more information about total SOC, e.g. distribution, as well as information about missing values and replacement method of them in the whole population. The suitable cutt-off point to predict the onset of depression is near the SOC median. What does this result means? Discussion of results remains hollow since the connections with previous research are limited.
4. What these findings mean in the public health in Japan? It would be interesting to know are there any special characteristics in work or work related stress/burnout in Japan. The question should be asked are the results comparable with Finnish workers and discussed in the paper.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.