Reviewer's report

Title: Disability pension by occupational class - the impact of work-related factors: The Hordaland Health Study Cohort

Version: 1 Date: 28 December 2010

Reviewer: Ossi Rahkonen

Reviewer's report:

This is an interesting and topical paper. To postpone early exit from work e.g. via Disability pension (DP) is an important task and socioeconomic position (SEP) differences in DP have rarely been examined. The data are good and the analyses are properly conducted. However, I have a few mainly minor comments.

- Major Compulsory Revisions
1. I was slightly confused with the number of cases. On page 5 the authors state that 8.598 men and 9.983 women (altogether 18.581) responded yielding a response rate 57 and 70. Subsample included (page 6) 3.548 men and 5.348 women (8.896). However, abstract and table 1 (page 25) show that there were only 7031 cases, that is 79% out of 8.896. How large was the attrition? The attrition is discussed on page 14 but if it was larger than 63% and if it was below 50% in men it may need some more discussion.

- Minor Essential Revisions
1. Are the attenuation percentages correct? The formula on page 10, I haven’t seen that one used before but I have seen the following formula used: HR initial – HR extended / HR initial – 1 * 100. I may have mistaken this but the authors may like to convince me.

2. End of Page 12; I would see a slight increase when adjusting for job demands.

- Discretionary Revisions
1. Could we expect that support at work could postpone disability pension? Did the authors think also including support from the DCSQ?

2. Perhaps health behavior or obesity mediates or modifies the association? Low position -> heavy physical work load -> obesity -> DP? Would health behaviour and weight (obesity) have an extra effect on the association between SEP and DP? Perhaps adjusting for prior health takes care of health behaviour?

Level of interest: An article of importance in its field

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'