Author's response to reviews

Title: The impact of self-reported exposure to whole-body-vibrations on the risk of disability pension among men: a 15 year prospective study

Authors:

Finn Tüchsen (ftu@nrcwe.dk)
Helene Feveile (hfe@nrcwe.dk)
Karl B. Christensen (K.Christensen@pubhealth.ku.dk)
Niklas Krause (nkrause@uclink4.berkeley.edu)

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Author's response to reviews: see over
Cover letter

Reviewer's report
Title: The impact of self-reported exposure to whole-body-vibrations on the risk of disability pension among men: a 15 year prospective study
Version: 3 Date: 20 April 2010
Reviewer: Dag Bruusgaard

Reviewer's report:
The article has improved, but I still lack a discussion of educational attainment as a possible confounder. I feel convinced that including education would have reduced the HR and that less than 5.6% of d.p. would have been attributable to WBV.

Author response:
Educational attainment a confounder? The reviewer does not give his rationale for including education in the multivariate model. Often education is included in models to adjust for different type of jobs and their level of physical demands when no explicit information on job demands is available. In our study we do have information on several physical exposures: physical job demands, working posture, and WBV. We don't think that we should treat education in our current regression models as a confounder. The rationale is that education is more an intermediary or pathway variable in the sense that more education tends to help people to end up in jobs with less physical work demands (including WBV as the distribution of WBV across industries in our paper shows). We do control for physical job demands and awkward work postures in our model 3 and that should already take care of the education-mediated aspect of physical job demands and actually in a more specific way than adjustment for education. However, persons with higher education could be more prone on one hand to successfully filing for disability pensions or, on the other hand to avoid disability retirement through job change or modifications. But since education is strongly related to exposure to WBV, adjustment for education could constitute an overadjustment, i.e. the variance associated primarily with WBV will be in part "explained away" by education.

As to WBV and DP I would have stated that "In our model, with the available explanatory variables, 5.6% of DP were attributable to WBV."

Author response:
We have changed the wording although this is tru for all studies.

Reviewer's report
Title: The impact of self-reported exposure to whole-body-vibrations on the risk of disability pension among men: a 15 year prospective study
Version: 3 Date: 23 April 2010
Reviewer: Ryan Lennon

Reviewer's report:
General
The paper is much improved and I thank the authors for their work on this revision.
Major Compulsory Revisions
Page 13, 3rd paragraph
The authors claim that this analysis does not "alter the magnitude of the estimates appreciably", but the third model produces a non-significant result for the association
between WBV and disability. The authors need not create a separate table for this analysis, but they should at least report the Hazard ratios and 95% CI. for the three models in the text, preferably in the Results section. Readers can then judge for themselves if the alteration is appreciable or not.

Author response:
We have now included the following paragraph in the result section and changed some text in the methods and discussion sections accordingly
“The analysis including only male employees below the age of 50 comprised 49.466 person years at risk and 120 transitions to disability pension. The estimated HR for disability pension retirement among men exposed to WBV was 1.77 (95% CI 1.09-2.86) when controlling for age, 1.66 (95% CI 1.02-2.69) when also controlling for smoking habits and BMI and 1.44 (95% CI 0.88-2.38) when also controlling for physical demands and body postures.”

Minor Essential Revisions
Page 8, line 6 and page 13, line 11 delete the comma in “Thus registrations for persons, who...” "Who” begins a restrictive clause and therefore a comma should not be used .

Author response:
We deleted the comma, Thank you for the help.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:
I declare that I have no competing interests.