Reviewer’s report

Title: The predictive effect of fear-avoidance beliefs on low back pain among newly educated health care workers with or without previous low back pain. A prospective cohort study

Version: 3 Date: 8 June 2009

Reviewer: Charlotte Leboeuf-Yde

Reviewer’s report:

This version number two is more easily read and understood.
In summary:
The question is well posed by the authors
The methods are appropriate and well described
The data are sound
The manuscript adheres to the relevant standards for reporting
The discussion and conclusions are fine (see minor compulsory comments below though)
The limitations of work are clearly stated
The authors acknowledge oprevious work (see comment below)
The title and abstract are OK
The writing is acceptable.

There are some few comments that I trust the authors to perform on their own. There are also some typing errors, so a final proof read is necessary.

Minor (compulsory) changes:

Abstract, Results, please mention that you are talking of cases with and without LBP AT BASELINE.

Conclusion: Do not forget that you had three objectives, all three should be concluded upon in the abstract (and in your final conclusion in the main manuscript).

Background, lines 2 and 3 on p.4, GenerAI not generEl population (spelling). Are you really talking about employees in general? The 6th reference, relates to health workers, so should be removed here, and the 7th reference relates to the general POPULATION.

You are arguing for physical activity to be the cause of LBP, but do not forget that they are getting older as well. LBP in a function of age in the early years. E.g. check Videman’s ref number 5, to see if he agrees with you.
In fact, your prevalence rates of 45-63% are not that high. They are within the limits for the general adult population, for example Per Kjær found a relatively high prevalence in his population study of 40 yr olds from Funen, Denmark, but everybody wants to think that the prevalence is high in certain working populations... It is all a matter of how stringently the studies in question have been performed, reported and compared.

Second para on page 4, last sentence, starting "However, this is an issue..." does not make sense. Needs cleaning up

P.5, first para,, 5th line. These beliefs may contribute to the explanation... I do not think that these beliefs contribute to an explanation, they contribute to the development of musculoskeletal pain rather...

bottom p.5, you write "To summarise..." but you do more than summarise. You bring in new info in that para.

Methods: Ethical permission? You seem to have forgotten to mention that.

P.8, 6th line from the bottom: practical training, an "i" is missing.

P.9, second para should be written as a separate paragraph (double spacing) and the second sentence starting: Converting scroes... is weird, the verb form is incorrect ("of standardize").

Study population, p.11, 4th line: If they were "ill" they could have been ill because of LBP, no? ???

Results

Please look again at your data interpretation. As far as I can see, you have included estimates that are insignificant in your result section.

I have interpreted your Tables 2 and 3 like this, looking only at the adjusted values, I find th is:

For those without previous LBP, physical work load has no importance but fear avoidance has. And if you look at the estimates only (disregarding whether significant or not) there is not even a dose-response.

For those with previous LBP, physical activity has an importance and there is a dose-response in both directions so to speak. I.e. in relation to number of days with LBP and in relation to work load. However, none of the steps is significant, in that the confidence intervals overlap. A test of trend or something like that would be needed to be sure. However, the findings are consistent, so even if untested, they feel good.

In relation to fear and avoidance, there is a positive association between it and LBP of more than 30 days in both groups, i.e. those without and with previous LBP. In addition, for those with previous LBP, there is (again) a dose-response between number of days with LBP and fear and avoidance, although small steps
in between the estimates.

In other words, only fear and avoidance matters in those without previous LBP but both physical work load and fear and avoidance matters in those with previous LBP. HOWEVER, for the latter group, the estimated odds ratio is higher for physical workload than for fear and avoidance, regardless with duration of LBP-category you are looking at.

I therefore do not agree with your interpretation of your own tables. Please check that again and amend as necessary. The discussion and conclusion needs to be changed to fit your (slightly) amended interpretation of results.

Also, your para 3 in the discussion on page 16, is completely incorrect, when you write about number of days (8 days or more) in cases with and WITHOUT LBP. The latter is incorrect, is it not?

In relation to your conclusions, I find it interesting that workload is not important in the sturdy people, those without previous LBP, but that fear and avoidance still plays a role.

For those whose back has already started playing up, it is perhaps the workload that matters... Let's not forget that old biomechanical contributing factor.

In both table 2 and 3, there is a typing error "emotioal" instead of "emotional".

Looking forward to reading the final work soon.

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

**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 interests.