**Reviewer’s report**

**Title:** Nordic Walking in the treatment of chronic low back pain patients. A single blind randomized clinical trial.

**Version:** 1  **Date:** 24 April 2009

**Reviewer:** Rahman Shiri

**Reviewer’s report:**

Nordic Walking in the treatment of chronic low back pain patients.

This is an interesting study. However, due to the small sample size the effect of Nordic Walking on chronic low back pain is not significant.

**Major Compulsory Revisions**

The change from baseline was used as a dependent variable. It is unclear why again in the analysis, the effect of Nordic Walking on low back pain was controlled for the baseline levels of the outcomes.

Was the expectation of treatment used as a covariate for adjustment or as an effect modifier? Table 1 shows that supervised NW differed at baseline from two other groups regarding the expectation of treatment.

Table 1: The columns do not have a heading. If the columns show three randomized groups, what are those supervised NW, unsupervised NW and advice to remain active that were presented in the rows.

Was the effect of Nordic Walking on low back pain was modified by gender, age, smoking, overweight, expectation of treatment, pain severity, functional limitation, sickness absence, and use of pain medication?

There are two contradictory statements in the first paragraph of the Discussion. 1) Supervised NW was no more effective than unsupervised NW or advice to remain active. 2) Supervised NW had a clinically significant effect.

No sub-group analysis was performed. Therefore, this study does not support that NW may be effective for selected sub-group of chronic LBP patients.

**Minor Essential Revisions**

What were dichotomous outcomes? Were they medication use, other treatment for low back pain, and sickness absence?

The following sentences need to be clarified. "In the exploratory analysis the primary endpoint was re-evaluated. We defined a successful outcome if the change was equal to or greater than the MCID". What does abbreviation MCID stands for? Is it "Minimum Clinically Important Difference"? It seems that in addition to using the change from baseline as continuous outcomes, they were
also dichotomized into two groups using MCID. This should be clarified.

In the Abstract you mentioned that the data was analyzed using intention-to-treat method. There is nothing in the statistical analysis on this issue.

Please clarify for which baseline variables mean improvement of the function scale of the LBPRS was adjusted for.

The results show that three groups differed at baseline regarding the prevalence of sickness absence due to low back pain. Why only return to work was used as an outcome, but not new onset of sickness absence due to low back pain during the follow-up.

The proportion of patients with obesity should also be included in Table 1.

Values for expectation of treatment in Table 1 were displaced.

The use of too many abbreviations makes the text hard to read. Moreover, there are several spelling errors and some long sentences need to be simplified.

Discretionary Revisions
This reviewer suggests beginning the Introduction with low back pain (paragraph 3), continuing with the effect of exercise on low back pain (paragraph 4), Nordic Walking (paragraphs 1-2), patient compliance with exercise therapy, and ending with the study aim (last paragraph).

Introduction: Exercise may be moderately effective for chronic or subacute low back pain, but the effect of exercise on the prevention of low back pain is not clear yet (Chou et al. 2007, Keller et al. 2007, Hamberg-van Reenen et al. 2007, and Chen et al. 2009).

Rahman Shiri
Finnish Institute of Occupational Health

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

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.