Reviewer's report

**Title:** The influence of self-reported leisure time physical activity and the body mass index on recovery from persistent back pain among men and women: A population-based cohort study

**Version:** 1  **Date:** 29 October 2012

**Reviewer:** Zumin Shi

**Reviewer's report:**

Based on the Stockholm Public Health Cohort, the authors assessed the association between leisure time physical activity and BMI and recovery from persistent back pain. The study found that regular leisure time physical activity improves recovery from persistent back pain in women not in men. The strength of the study is its large sample size and detailed information on potential confounders. The statistical analysis strategy is appropriate. The presentation of the results is good.

**Major concern**

1. There is no mention of health service use. The association between leisure time physical activity and recovery from back pain among women could be confounded by medication or health service use. The gender difference of the association may also be due to the difference in health service use.

**Minor**

1. Change in lifestyle factors may contribute to the recovery from back pain. The finding will be robust if the authors can address this issue.

2. As more than 20% of the participants recovered from back pain, odds ratio will overestimate the risk. I would suggest use other measurements, e.g. incident rate ratio by Poisson regression.

**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’