Reviewer’s report

Title: Derivation and validation phase for the development of clinical prediction rules for rehabilitation in chronic nonspecific low back pain patients: a protocol of a randomized controlled trial

Version: 1  Date: 9 October 2014

Reviewer: Lira Pi

Reviewer’s report:

“The authors presented the development of CPR to predict treatment response to three forms of exercise therapy for patients with nonspecific CLBP and the validation based on the CPR derived in advance to predict a better therapy effect for matched therapy. The discussion of the presented design and methods for nonspecific CLBP patients is itself interesting. My comments are:

Major Compulsory Revisions
1. The power analysis to calculate sample size contains unclear two-tailed hypothesis statement in derivation phase. The sample size calculation may be different depending on what hypothesis is: a one-tailed or a two-tailed hypothesis.
2. In Study design, the interest is that treatment success will be higher in the matched group than in the unmatched group which means a one-tailed hypothesis. However, in validation phase, when the sample size is calculated using power analysis, a two-tailed hypothesis statement is presented to determine if there is a difference in matched and unmatched therapy for success. Why is there the discrepancy?

Minor Essential Revisions
3. In Figure 2, letter “B” was dropped out of intervention group.
4. Third paragraph in discussion section mentioned “1,5 year” being taken to finish each phase for collecting samples. Does it mean 18 months?

Level of interest: An article of outstanding merit and interest in its field

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.