Reviewer's report

Title: Modeling early recovery of physical function following hip and knee arthroplasty

Version: 2 Date: 20 September 2006

Reviewer: Jos W Twisk

Reviewer's report:

General

The paper improved considerably, but there are still a few points that remain unclear to me.

The model building process is still questionable. The authors state on page 11 that “at each stage, terms introduced earlier in the equation remained if they were significant”. I don’t understand. Did the authors perform some forward prediction modeling? What do they mean by ‘each stage’?

According my suggestion the authors included two tables with regression coefficients. Unfortunately, the tables were not very informative. For instance, when an interaction term between two continuous variables is in the model, the regression coefficients are hardly interpretable. Maybe, the authors should report only the model without interactions and discuss the interactions in the results section. Secondly, the magnitudes of variance estimates are also not informative; they should be left out of the table. The reason why I wanted to see a table with regression coefficients is to get some idea of the magnitude of the relationship instead of only significant versus not significant! Another possibility is to give a table with the regression coefficients for each of the separate predictor variables (also the non-significant ones). That will provide the reader with more information regarding the observed relationships.

In table 5, the site of the arthroplasty is in the model, while the p-value is not significant. According to your statement in the methods section, this is rather strange (maybe site of arthroplasty is forced in the model???).

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'