Reviewer's report

Title: Process skill rather than motor skill seems to be a predictor of costs for a stroke patient in working age from a rehabilitation clinic; a longitudinal study with a 1 year follow up post discharge.

Version: 1 Date: 28 November 2006

Reviewer: Katherine Virgo

Reviewer's report:

General
The authors address an important topic: Identification of predictors of costs for stroke patients of working age.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. The authors admit that the sample size is very small, but need to go one step further and identify the study throughout (abstract, body of paper, etc.) as pilot work.

2. Even if identified as pilot work, provide a power analysis for the regression analysis so that it is clear to the reader how large an effect would have to be for the study to find it with a sample size of only 58.

3. Results are in the methods section rather than in the results section (for example, "58 patients participated after informed consent").

4. The study hypotheses are buried in the data analysis section rather than prominently appearing in the abstract and in the introduction.

5. The tables (which are clearly results) are introduced in the methods section rather than being introduced in the results section.

6. Reference is made in the introduction to previous studies and the "significant trend toward lower costs with increasing age". Indicate the average age for these previous studies as they serve as a point of comparison to the study data.

7. In the costs' portion of the methods section, the author needs to do a better job of distinguishing between costs and charges. Clearly indicate when charges are used as a proxy for costs. Clarify in the abstract as well.

8. It is also unclear whether the perspective for inpatient costs is costs to the hospital versus costs to the patient for all other costs. Or is costs to the patient the perspective for the entire analysis?

9. The linear regression description in the data analysis portion of the methods section provides no details regarding approach (stepwise, backward, etc.), p value cutpoints, goodness of fit measures, etc.) How were variables selected for inclusion into the model?

10. The methods section provides no description of the treatment of outliers or sensitivity analysis.

11. The regression discussion in the results section mentions the use of logits. However, the methods section does not describe why logits were used.

12. In the regression discussion provide an example of how one of the changes in costs were calculated with one logit higher ability. For example, the author says that cost decreased by 16920 Euro with a one logit increase in ability.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. For all instances in the text or tables where means are reported rather than medians, provide standard
deviations.

2. In the regression discussion in the results section, clarify ability in the phrase, "...With one logit higher ability,..." Assume process ability is meant?

3. In the second sentence of the discussion section and again in the third to last sentence in the 2nd paragraph of this section, younger patients are referred to. Each time this terminology appears, please define younger age in parenthesis. I assume it differs because sometimes the author is referring to the current study and sometimes to the literature.

4. In the conclusion section, change "...rather than motor skill is a predictor..." to "...rather than motor skill is a significant predictor..."

5. Table I is not informative in its present form. The author needs to:
   a. Provide percentages for all categorical variables in addition to N and modify the column header to reflect the change.
   b. Provide variable names with the categories indented (for example: Gender: Male and Female should be indented.
   c. Define number in stroke unit and number in other wards. Is this number of patients or average number of days in the unit/ward?
   d. Provide comparable numbers (for each variable for which data are available) for this age group in Sweden with statistical comparisons (per discussion in 1st sentence of 2nd paragraph of the results section).
   e. Discuss the statistical methods used to make the comparisons in 5d above in the methods section.

6. Table II: Provide standard deviations for the means. Also provide grand totals for the costs in Euros. In a footnote, differentiate between costs and charges or indicate that charges are used as a proxy for all costs.

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Discretionary Revisions (which the author can choose to ignore)

1. In the discussion section, change "...For people in working age it..." to "...For people of working age, it".

2. In Table III, delete line above home integration and describe interpretation of parameter estimates in a footnote to the table.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests.