Reviewer's report

Title: Use of manual and powered wheelchair in children with cerebral palsy: a cross-sectional study

Version: 4 Date: 27 July 2010

Reviewer: Annet J Dallmeijer

Reviewer's report:

The paper has been improved by reducing the number of Figures considerably, by adding that it is a cross sectional design and deleting the parts about prediction. However, after reading the paper for the second time I still feel that the results are hard to follow and that there is a discrepancy between results and conclusions. The authors clarified some aspects in their reply to the reviewers but did not change this in the paper.

The introduction is improved by the changes made. Please see suggestion to improve research question below.

- Major Compulsory Revisions

1. My former comment that the conclusion ‘To achieve a high level of independent mobility, both manual and powered wheelchairs should be considered at an early age for all children with impaired walking ability.’ is not supported by the data, still holds in my opinion. The data show that there is a low level of self mobility in certain groups, which may indicate or suggest that this has a negative effect on their development, but the relationship with the development is not investigated in this study. Please modify the conclusion accordingly.

Discussion

Avoid repeating results in the discussion and conclusion. This can reduce the length of the discussion. The discussion should be more focussed on the research question. For example the section on postural instability is interesting but it is not clear to me how it relates to the results of the current study.

- Minor Essential Revisions

1. Research question could be more focussed by adding in ‘relation to’ between ‘indoors and outdoors’ and ‘the degree of independent..’. The last part of the sentence could be changed into ‘for different GMFCS levels, CP subtypes and age groups’.

2. The specific questions about wheeled mobility in the method section do clarify the methods, but I think that they can be summarized in stead of repeating the same question 4 times (discretionary Revision). Please add how options B and C are defined in the questionnaire, since most children are likely to both self propel (B) and being pushed by an adult (C). This specific point should be added to the
limitation section.

3. Methods: Please move the statistical comments that were added to the legends to the text section. I am not a statistician but the Kruskal Wallis test is as far as I know not applicable to proportions.

4. Move last sentence of first paragraph p.7 (The distribution …) to the results section and add statistical results with respect to GMFCS level, CP subtype and age as described on p.8 (There were no...girls 5%).

5. Results Indoor Mobility: change 562 into 556 (6 subjects are missing for indoor mobility). Same applies for outdoor mobility section.

6. Results: The results are hard to follow because the information is presented differently in text and Figures/Tables. Indoor and Outdoor mobility are described separately in the text but are presented together in the Tables 3 and Fig 1 and 2. Please consider to reorganize this part.

7. Fig 1 and 2: Is the category 'Attendent Operated' both manual and powered wheelchair?

8. Results: Please always add whether you are talking about manual or powered wheelchair use. P. 8, 1st paragraph: 39% manoeuvred their wheelchairs independently: I can’t find this percentage in the Figure. Does it refer to manual or powered wheelchair use? Last sentence of this paragraph can be removed (For distribution..)

9. Association between use of manual and powered wheelchair with GMFCS level: add to section about GMFCS level on p.8. There is a discrepancy between these results.

10. References should be checked: Nr 1,2 and 15 have no authors listed.

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