Reviewer’s report

Title: An evaluation of clinical treatment of convergence insufficiency for children with reading difficulties

Version: 2 Date: 2 June 2011

Reviewer: Gladys Mitchell

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Major Compulsory Revisions:
1. There appears to be an error with respect to the statistical analysis (factorial analysis). Since subjects were measured at two time points, the numerator degrees of freedom on the within-subject effect (time) should be one (#time points – 1) instead of two as reported on Table 2. In addition, I don’t see any report on the significance (or lack of significance) of the interaction term (time x treatment group).

2. Although it is commendable that the groups did not differ at the first visit with respect to all of the clinical measures tested by the author, the advantage of randomization is that it limits the likelihood of differences in unmeasured variables (for example, things like personality that would impact on treatment chosen and response to treatment). It is my feeling that the authors should address the potential biases associated with their study design and their potential impact on the reported findings. It is not that results should be reported unless from a randomized trial, but that it is important to report biases.

Minor Essential revisions:
1. When reporting the results from the factorial analysis, I would prefer to see the authors label the within-subject effect as “time” and the between-subject effect as “treatment group.” I fear that a reader with limited knowledge of statistics would not be able to make the translation.

2. In the Results section, I believe the authors need to at least reference Table 3-7 (which contain the mean data for each group at the first visit) in the paragraph about “Before Intervention.” Of course, I would prefer if the authors actually reported some of the means (or perhaps the range of the means across the 3 groups).

Discretionary Revisions:
1. It would be my preference to report the results of each factorial analysis as a footnote to Table 3-7 and omit Table 2. This would provide the reader with one location to see the descriptive statistics and results from the significance tests.

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.