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Published in:
PLoS ONE

DOI:
10.1371/journal.pone.0119522

Citation for published version (APA):
https://doi.org/10.1371/journal.pone.0119522

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Response to the Correction by Spencer-Smith and Klingberg: Unaddressed Concerns

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(PLOS ONE, June 30, 2015)

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Dear editor,

We are writing in response to the correction by Spencer-Smith and Klingberg (S&K; posted on June 3, 2015) based on our previous letter to the editor (posted on April 4, 2015).

Although some corrections have been made, we are concerned about those that are still missing.

In order to provide an adequate report of the results, we suggest that the following corrections should also be adopted (these corrections were also suggested in our previous letter).

1. Changed outcomes of subgroup analyses

As indicated in our previous letter (see Table 1), after correcting the coding errors, the effects of Cogmed WM training were no longer significant for studies using an active or non-adaptive control group, for studies using a specific measure of inattention in daily life, for children and adolescents, for patients with ADHD, and for participants with WM impairments. We suggest that the relevant parts of the manuscript are corrected accordingly.

2. Benefits?

The title of the S&K article is “Benefits of a Working Memory Training Program for Inattention in Daily Life: A Systematic Review and Meta-Analysis”, and their conclusion is “Benefits of a WM training program generalise to improvements in everyday functioning”. However, the difference between the Cogmed groups and control groups was analyzed using only the post-treatment/follow-up ratings of inattention. The pre-test ratings were not

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taken into account, which makes it impossible to interpret which group benefits or improves most, or if there is any benefit or improvement at all. Therefore, either the data should be re-analyzed using a standardized mean difference that accounts for the pre-test ratings, or terms like ‘benefit’ and ‘improvement’ should be corrected throughout the article.

3. Correcting for publication bias

In our previous letter to the editor we showed that, with correct coding and correction for publication bias, the overall effect of Cogmed WM training on inattention was no longer significant ($p=0.130$). In their correction S&K comment on this reanalysis, stating that, in their meta-analysis, it is incorrect to correct for publication bias because there was no significant between-study heterogeneity in effect sizes. We are not aware of any publication supporting this claim. On the contrary, the literature suggests that correction is inappropriate when effect sizes are heterogeneous (as cited in section 10.4.4.2 "Trim and fill" of the Cochrane handbook). So, we suggest that the publication bias corrected results should also be reported. This will give the reader insight into the limited robustness of the effects presented by S&K.

Therefore, we kindly ask the editor and the authors to provide a complete correction of the manuscript. This is not only important to promote progress in science, but also for clinical practice. Therapists, patients and their caregivers should be adequately informed on the potential benefits and limitations of interventions.

With kind regards,

Sebastiaan Dovis, Joost Agelink van Rentergem and Hilde M. Huizenga