

Erratum to: Improvements in Spelling after QEEG-based Neurofeedback in Dyslexia: A Randomized Controlled Treatment Study

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In the first 2010 issue of Applied Psychophysiology and Biofeedback we presented data concerning the effects of neurofeedback on various parameters of reading and spelling (Breteler et al. 2010). For spelling we reported a large effect size of 3.02. In a subsequent correspondence with prof. Daniel Brandeis (Brandeis 2010) from the University of Zürich, Switzerland, he and his co-workers pointed to an incorrect use of the data by us, using the formula of Becker (1998).

Klauer (1993) showed that the overall effect size of pre-post data from an experimental and control group can be computed as $d_{\text{corr}} = d_{\text{post}} - d_{\text{pre}}$.

Calculating d_{pre} (using the formula calculator of Becker) with $m_{\text{expT1}} = 69.1$ and $s.d._{\text{expT1}} = 32$ and $m_{\text{controlT1}} = 66.9$ ($s.d._{\text{controlT1}} = 20.9$) leads to a pre-treatment effect size of 0.08.

Calculating d_{post} with $m_{\text{expT2}} = 80.6$ ($s.d._{\text{expT2}} = 32.2$) and $m_{\text{controlT2}} = 70.9$ ($s.d._{\text{controlT2}} = 24.4$) leads to a posttreatment effect size of 0.34.

So, the corrected overall effect size will be 0.26. This was also suggested by Brandeis, using a site by Jacobs (1999).

This finding nuances the conclusions from our study. The effect of neurofeedback on spelling is still significant, but small rather than average. Therefore, we would like to add that more research is needed to arrive at more final conclusions on the effects of neurofeedback training on the learning of reading and spelling.

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