



Response to Commentary of Dr. Robert T. Thibault and Dr. Hugo Pedder entitled: “Excess significance and power miscalculations in neurofeedback research”

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We are grateful that an issue with the default setting of the GPower software has been discovered by Dr. Thibault and Dr. Pedder that has led to inflated power calculations in our paper (Tursic et al., 2020) and, similarly, in a fNIRS neurofeedback review (Kohl et al., 2020), as described in the Commentary. As appreciated by the authors of the Commentary, we provided all data and calculations as transparently as possible so that such unintentional mistakes can be discovered and corrected. We immediately decided to write a Corrigendum to our paper that will report the corrected power and significance values.

Our power analysis followed precisely the steps described in the fNIRS neurofeedback review co-authored by Dr. Thibault (Kohl et al., 2020) and both reports were, thus, affected by the same easy-to-miss GPower default setting issue. While two review papers (one fMRI, one fNIRS) are affected by this issue, the title of the Commentary “Excess significance and power miscalculations in neurofeedback research” (highlighted by us) might be misunderstood in the sense that there is a general problem with significance and power calculations in neurofeedback research. However, the software problem that unintentionally led to inflated power calculations and that the authors identified was not specific to neurofeedback research and could have equally affected other areas of clinical research.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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