Foreword

The number of children that have been diagnosed with an Autism Spectrum Disorder (ASD) has increased considerably in recent years. Primarily, genetic factors are discussed as being the causes of this neurodevelopmental disorder. Neuropsychological research indicates an abnormal development of the brain, causing deficient brain functions. The few existing scientifically proven treatment approaches for ASD are mainly behavior-based. In spite of conspicuous deviations in the brain wave activity and the increasing implementation of biofeedback therapy, Neurofeedback training is not yet significantly considered as a therapy approach for treating ASD.

In this evolving research context Franziska Eller conducted a quasi-experimental study in order to investigate the effectiveness of Neurofeedback training in addition to a basic neurodevelopmental treatment for children with ASD. The multi-methodical approach used included EEG and test data of the participants as well as behavior assessments by their parents and teachers. This extensive research design has not been applied under laboratory conditions, but has been implemented in an actual treatment setting. Thereby the author added an important contribution to the limited number of existing studies in this field of research.

The results of the study indicate that, in contrast to the control group, children who received an additional Neurofeedback training showed clinically significant improvement in prior abnormal brain wave activity. The Neurofeedback sessions were aimed at identifying and training each child's individual abnormalities in the brain wave activity patterns. A decrease of autistic behavioral peculiarities was observed in the participants of both groups, while children receiving an additional Neurofeedback training showed a greater reduction of mannerisms. These conclusions can serve as a reasonable basis for future studies. However, a direct relation between the changes in the brain wave activity and the behavior of the children could not be established.

With her methodical approach and an innovative strategy of data analysis, Franziska Eller deserves credit for presenting a reasonable guideline for future research projects in the practical context of treatment for children with ASD. The findings are promising enough to justify an intensification of corresponding research efforts and also to consider Neurofeedback training as a feasible treatment option for Autism Spectrum Disorders.

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