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Evaluation of QEEG, GARS-2, and Clinical Interviews in a Child with Autism Before and After Treatment Using the Mental Simulation Method: A Case Study

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ABSTRACT

Introduction: Autism Spectrum Disorder (ASD) is a neurodevelopmental condition with complex and multifactorial causes, making both diagnosis and treatment particularly challenging. This case study presents the outcomes of a 90-day intervention using the Mind Simulation Method (MSM) for Nadia, a 12-year-old girl diagnosed with severe ASD who exhibited persistent communication and attention difficulties from early childhood. Following limited progress through pharmacological and conventional psychotherapeutic treatments, MSM was introduced as an alternative approach.

Method: With informed consent from her family, Nadia engaged in a structured program that included: (1) the GARS-2 assessment (initial score: 85), (2) QEEG evaluations, (3) monthly psychiatric interviews along with GARS-2 reassessment, (4) biweekly clinical psychologist sessions, and (5) daily access to the therapist, including regular video recordings documenting her progress. The MSM, rooted in neurobehavioral principles, aims to improve learning and concentration by simulating real-life activities in a simplified format within a controlled, low-stimulation environment.

Results: After 90 days of intervention, QEEG data showed significant neurophysiological improvements in frontal and central regions, particularly in Delta, Beta1, Alpha, and SMR wave activity across FZ, CZ, C3, and C4 areas. A notable decrease in GARS-2 scores was observed—from 85 to 45—indicating reduced ASD symptom severity. Clinical evaluations reported improvements in attentional control, compliance with instructions, production of two-word phrases, and the ability to make basic verbal requests. **Conclusion:** These findings suggest that the Mind Simulation Method may serve as an effective complementary approach for children with ASD, contributing to both neurophysiological regulation and functional behavioral development.

Keywords: Autism, Mind Simulation, Neurobehaviorism, QEEG