

P02-92

THE EFFECT OF COGNITIVE REMEDIATION WITH A BIOTIC DESIGNED COMPUTER BASED TRAINING (MEBITRAIN) ON DEPRESSIVE PATIENTS: A PILOT STUDY

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Introduction: Computer based trainings (CBTs) are established in the rehabilitation of mentally ill people to recover cognitive skills (Medalia et al., 2009). The Critique to some CBTs are lack of preparation for real life scenario, no use of tasks that simultaneously engage multiple cognitive processes and lack of enhancing motivation (Medalia & Choi, 2009). This may be summarized as a lack of biotic design in CBTs.

Objective: In depressive disorders besides other symptoms a lack of energy/motivation, forgetfulness and difficulty in concentrating are observable. The goal of this pilot study was to develop a new "biotic" designed CBT (Mebitrain) and evaluate its effect on global working memory (GWM) and motivation with data from patients suffering from depression.

Methods: To test whether Mebitrain enhances GWM (measured before and after a ten day training period with the LGT from Bäumlner) and motivation (measured before and after training with custom rating scales and during the training with time and performance) five depressive (ICD diagnoses F31.0, F33.2, F32.3) patients were tested.

Results: Differences between pre- (mean 33.6 ± 10.35) and post- (mean 38 ± 6) LGT values show a marginal significant trend ($p = 0.1$) with moderate effect size ($d = .54$).

The time finishing the training decreased per training session significantly with an increasing in performance ($r = -.788$, $p < .005$).

Conclusion: First results indicate that the development of a biotic designed training and its application may increase global cognitive functions and motivation in depressive patients.

Limitations (e.g. sample size, transfer, etc.) of this pilot study are discussed.