
EFFECTS OF DIALECTIC BEHAVIOR THERAPY ON THE NEURONAL CORRELATES OF EMOTION REGULATION IN BORDERLINE PERSONALITY DISORDER

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Introduction: A fundamental aspect of Borderline Personality Disorder (BPD) is emotional dysregulation. Dialectic Behavior Therapy (DBT) is a widely used therapy program developed specifically for improving emotion regulation in BPD.

Objectives: To date little is known about the neural mechanisms associated with the amelioration of BPD symptoms after DBT.

Aims: In the present study we investigated pre-post therapy changes in a) brain activity during cognitive reappraisal, one commonly acquired skill during DBT and b) brain gray matter volume attributable to successful participation in a DBT skills training.

Methods: Before and after a 12-week in-patient DBT treatment program 22 female BPD patients and 22 healthy control subjects participated in two fMRI sessions of a well-established emotion reappraisal paradigm. Using voxel-based morphometry (VBM) changes in gray matter volume were analysed. Pre-post therapy changes were compared between the group of DBT-Responders (n=12) and DBT-Non-Responders (n=10).

Results: After participating in a DBT skills training, DBT responders exhibited a reduced activity in vIPFC compared to the first scanning session and to DBT non-responders during reappraisal of aversive stimuli. The reduction in vIPFC activity correlated significantly with symptom improvement after therapy. After therapy DBT-Responders showed a significant higher gray matter volume in an extended cluster comprising anterior insula, caudate nucleus, and putamen.

Conclusions: In the current study, we provide evidence that a successful participation in DBT is associated with altered activity in the vIPFC and changes in gray matter concentration in anterior insula and striatum.