



Neuroimaging of Emotion Regulation

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Emotion regulation (ER) is a fundamental skill for proper social interactions, which plays an important role in well-being and adaptive functioning of human. ER is a core feature of different psychiatric disorders such as major depressive disorder, borderline personality disorder, antisocial personality disorder, bipolar mood disorder, impulse control disorder, and attention deficit hyperactivity disorder.

Neuroimaging provides a promising non-invasive tool to understand the neural correlates of ER in vivo. During the last 2 decades, many neuroimaging studies using functional magnetic resonance imaging or positron emission tomography techniques aimed to identify functional patterns of ER in the brain. A neural model of ER suggested the different voluntary and automatic regulatory processes, centered in different regions of prefrontal cortex including superior frontal gyrus, inferior frontal gyrus, anterior cingulate cortex, supplementary motor area, and also bilateral amygdala/parahippocampus.

Recently, it has been demonstrated that cognitive behavioral therapy significantly improved dysfunction of different brain regions responsible for ER in different psychiatric disorders.