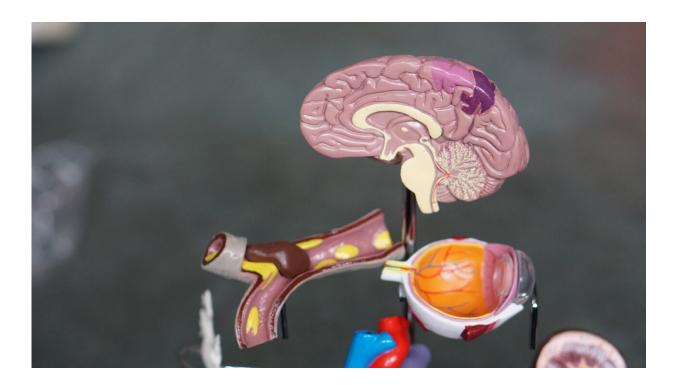


## **Emotion-focused therapy for bipolar disorder targets the amygdala**

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A new study in *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, identifies a therapeutic tool focused on emotional awareness that increased activation and connectivity of an emotionregulating center in the brain. The therapy may be effective in the longterm treatment and relapse prevention of bipolar disorder (BD).



Patients with BD experience alternating extreme mood states typically categorized by mania, depression, and impaired social functioning. The complex mechanisms of BD make it difficult to treat, often requiring a concoction of medications and <u>behavioral interventions</u>, which can take the provider and patient years to successfully personalize.

Led by Kristina Meyer, Ph.D., and Catherine Hindi Attar, Ph.D., at Charité—Universitätsmedizin Berlin, in Berlin, Germany, the researchers investigated the impact of two psychotherapeutic interventions on BD symptoms and on amygdala activation and connectivity with other emotion-related <u>brain</u> regions using <u>functional</u> <u>magnetic resonance</u> imaging (fMRI).

The amygdala—a pair of small, bilateral regions in the brain's limbic system—helps regulate emotion and detect salient stimuli. Research has shown that BD <u>patients</u> (outside of a manic episode) display altered activation and functional connectivity of the amygdala.

In one intervention, 28 patients underwent an emotion-focused therapy where they were guided to perceive and label their emotions without avoidance or suppression. The second intervention, delivered to 31 participants, was a specific cognitive-behavioral therapy that focused on practicing social interventions.

The researchers recorded the patients' symptoms using a longitudinal evaluation interview for 24 weeks pre-treatment as well as for six months throughout treatment, six months post-treatment, and between six and 12 months post-treatment. The evaluation produced separate weekly measures of mania and depression on a 1 to 6 scale ranging from no symptoms (1) to psychotic symptoms or severe functioning impairments (6). Seventeen participants from each treatment group underwent fMRI while performing an emotional face-matching task, as did 32 healthy control subjects.



"In line with our expectations, the patients participating in the emotionfocused therapy showed an increased activation and connectivity of the amygdala post-intervention compared to the patients receiving the cognitive-behavioral intervention, which may reflect improved emotion processing and increased tolerance towards negative emotions," said Dr. Meyer. In contrast, the patients of the cognitive-behavioral intervention demonstrated increased activation of brain regions related to social function but not altered amygdala activity.

"The results of this study suggest that different psychotherapeutic approaches unfold their beneficial effects by different neural routes," added senior author Felix Bermpohl, Ph.D., Charité—Universitätsmedizin Berlin.

Cameron Carter, MD, Editor of *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, said of the work, "This study, which uses task fMRI to engage specific brain circuits affected by bipolar disorder before and after different forms of therapy, reveals new insights regarding their mechanisms of action in the brain. The pattern of results seen using this approach also provides a unique form of validation for the clinical approach used, by establishing a link between the theoretical model motivating the emotion-focused <u>intervention</u> and its effects in the brain."

**More information:** Kristina Meyer et al, Daring to feel: Emotionfocused psychotherapy increases amygdala activation and connectivity in euthymic bipolar disorder. A randomized controlled trial, *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (2023). DOI: 10.1016/j.bpsc.2023.02.008

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