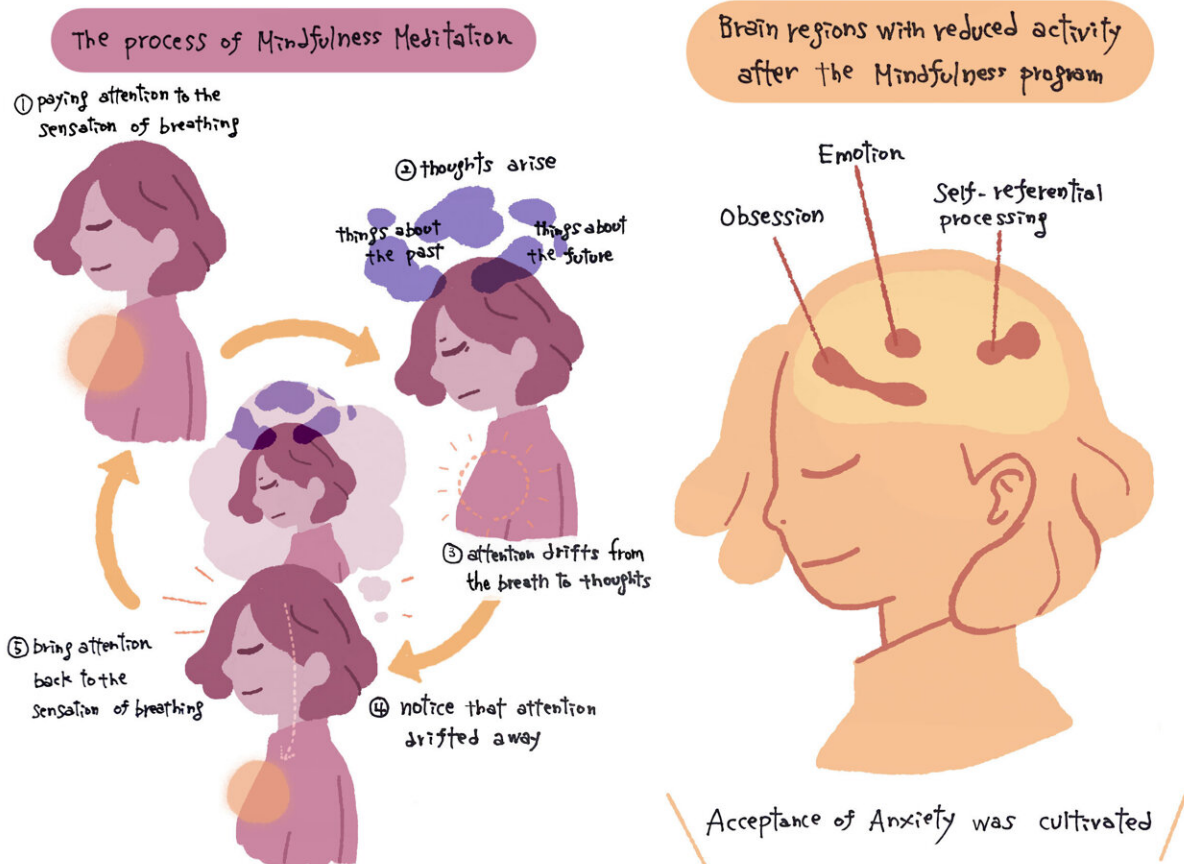


Neural correlates of a mindfulness-based intervention in anorexia nervosa

February 3 2023



The process of Mindfulness meditation and brain regions with reduced activity after the Mindfulness program. Credit: KyotoU / Robin Hoshino

Sadly, many family members, friends, and celebrities have suffered

from anorexia nervosa, or AN, a severe psychiatric illness associated with intense anxieties concerning weight, shape, and self-esteem. AN is characterized by an eating disorder, food restriction, voluntary vomiting, and extreme emaciation.

Mindfulness meditation has already become a globally recognized method for addressing AN. Its effectiveness in clinically treating neurogenic emaciation, however, was not previously studied.

A team of researchers at Kyoto University's Graduate School of Medicine has now found that mindfulness meditation does reduce such anxieties. Results from the study show changes in the activity of brain regions involved in anxiety.

The team's [mindfulness meditation](#) program has seen a significant decrease in obsessive thoughts about test subject's self-image and brain activity associated with related emotions.

"Our results suggest that the participants in the study became better at accepting their anxiety as it is," says lead author Tomomi Noda.

Mindfulness and meditation work hand-in-hand. The former teaches practitioners to hone their awareness of their present experience and their ability to not judge and rather accept their circumstances. The latter is the medium by which mindfulness can be approached.

"We focused on the possibility that patients with AN try to avoid their crippling anxiety about weight gain and self-image by restricting food or vomiting," adds co-author Masanori Isobe.

A 4-week mindfulness intervention program examined neural changes using tasks designed to induce weight-related anxiety. The researchers then regulated this anxiety by helping patients accept their current

situations and experiences at face value, instead of avoiding them.

The researchers used [functional magnetic resonance](#) imaging—or fMRI—to analyze attention regulation in relation to eating disorders. The study's results support the subjective experiences of the researchers, although it was unexpected to them that several global events, such as the COVID-19 pandemic and the Russo-Ukrainian war, were significant factors in patients' anxieties.

"We anticipate practical implications of our results in [clinical psychiatry](#) and psychology and broader research into mitigating suffering through mindfulness, using the strategy of self-acceptance to regulate attention," concludes group leader Toshiya Murai.

The research is published in the journal *BJPsych Open*.

More information: Tomomi Noda et al, Neural correlates of a mindfulness-based intervention in anorexia nervosa, *BJPsych Open* (2023). [DOI: 10.1192/bjo.2022.637](https://doi.org/10.1192/bjo.2022.637)

Provided by Kyoto University

Citation: Neural correlates of a mindfulness-based intervention in anorexia nervosa (2023, February 3) retrieved 23 May 2024 from <https://medicalxpress.com/news/2023-02-neural-mindfulness-based-intervention-anorexia-nervosa.html>

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