

# Regulating emotion after experiencing a sexual assault

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After exposure to extreme life stresses, what distinguishes the individuals who do and do not develop posttraumatic stress disorder (PTSD)? A new study, published in the October 1st issue of *Biological Psychiatry*, suggests that it has something to do with the way that we control the activity of the prefrontal cortex, a brain region thought to orchestrate our thoughts and actions.

Researchers at the Mount Sinai School of Medicine examined women who had been the victims of violent sexual assault, some of whom developed PTSD and others who did not develop any serious emotional symptoms afterwards. Using a brain imaging technique, they evaluated the ability of these women to voluntarily modify their own responses to unpleasant emotional stimuli and found that it was the trauma history itself, not how well they endured this sort of trauma, that influenced their ability to dampen subsequent emotional responses.

Surprisingly, however, the ability of the subjects to amplify their emotional responses to unpleasant stimuli was related to psychological outcome after the sexual assault. The resilient individuals, that is, those who endured sexual assault without developing emotional symptoms, were able to enhance the activation of emotional [brain circuitry](#) in response to unpleasant stimuli more than either those with PTSD or healthy controls who had never experienced a serious [sexual assault](#).

Corresponding author Dr. Antonia New explained the findings: "This raises the possibility that the ability to focus on negative emotions

permits the engagement of cognitive strategies for extinguishing negative emotional responses, and that this ability might be related to resilience. This is important, since it has implications for how we might enhance resilience."

These findings suggest that exposure to extremely stressful situations may leave an "emotional scar" that may influence the capacity to be resilient to the impact of subsequent stressors, even when one does not develop PTSD. "These data seem to support an idea that has emerged from clinical descriptions of resilient people, i.e., that people who are resilient are able to be flexible in the way that they respond to changing emotional contexts. It would be helpful to know how we can enhance the flexible activation of these [prefrontal cortex](#) networks in people with compromised resilience," commented Dr. John Krystal, Editor of [Biological Psychiatry](#).

Dr. New agrees, adding that "perhaps the enrichment of the broad capacity to tolerate negative emotional experiences might be helpful in promoting resilience. Further work needs to be done on whether the feature of this capacity that relates to resilience is about the ability to tolerate one's own responses, or whether it is the ability to respond to distress in others."

More information: The article is "A Functional Magnetic Resonance Imaging Study of Deliberate Emotion Regulation in Resilience and Posttraumatic Stress Disorder" by Antonia S. New, Jin Fan, James W. Murrough, Xun Liu, Rachel E. Liebman, Kevin G. Guise, Cheuk Y. Tang, and Dennis S. Charney. All authors are affiliated with the Department of Psychiatry, Mount Sinai School of Medicine, New York, New York. Dr. New is also affiliated with the Mental Health Care Center, James J. Peters Veterans Affairs Medical Center, Bronx, New York. The article appears in *Biological Psychiatry*, Volume 66, Issue 7 (October 1, 2009), published by Elsevier.

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