Researchers identify neural signature for Borderline Personality Disorder

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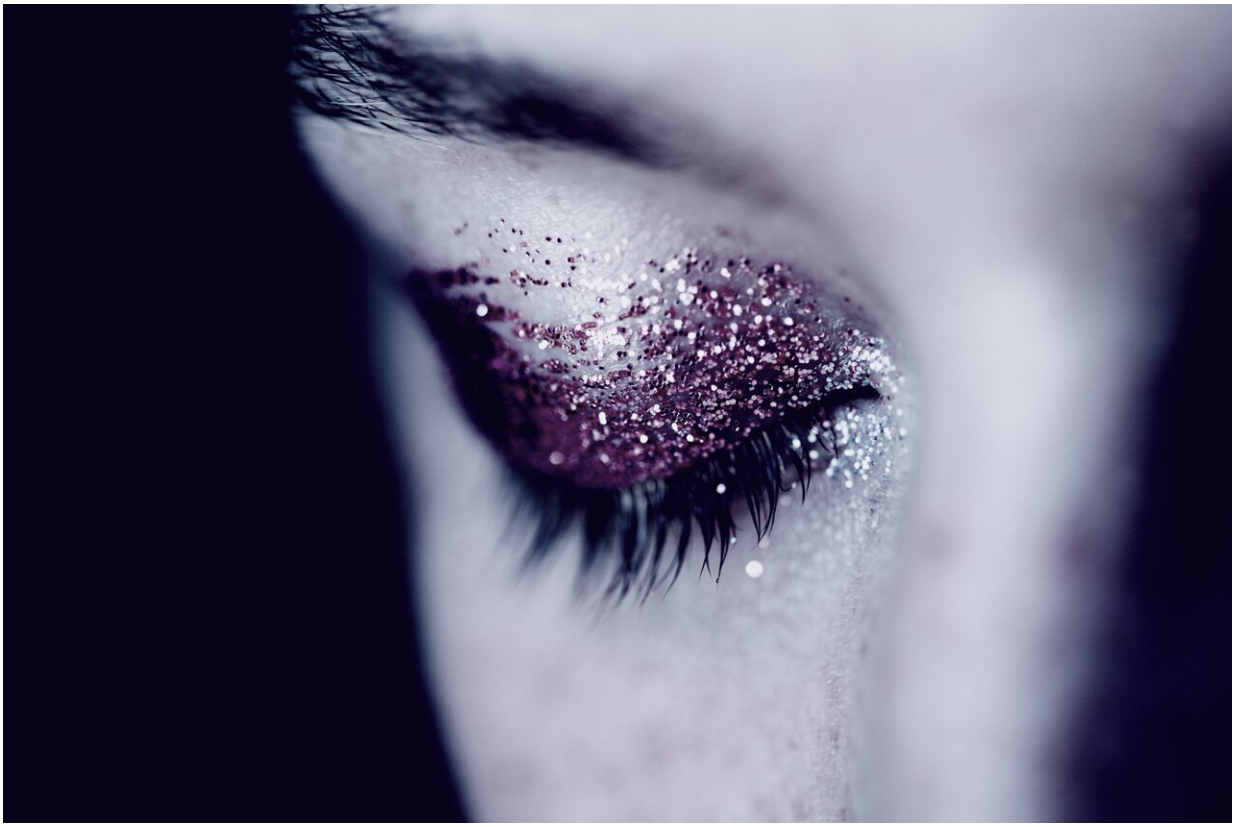

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A new study of a brain region called the rostro-medial prefrontal could potentially advance diagnosis and therapies for Borderline Personality Disorder (BPD). Entitled "Rejection Distress Suppresses Medial

Prefrontal Cortex in Borderline Personality Disorder," the research appears in the journal *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

Researchers from The City College of New York, Columbia University, and New York State Psychiatric Institute led by CCNY psychologist Eric A. Fertuck discovered that the rostro-medial prefrontal specifically becomes more active when people are rejected by others at greater rates. However, individuals with BPD—characterized by interpersonal sensitivity to rejection and emotional instability—do not display rostro-medial prefrontal cortex activity when rejected.

The brain reacts with rostro-medial prefrontal activity to rejection as if there is something "wrong" in the environment. This brain activity may activate an attempt to try to restore and maintain close social ties to survive and thrive. This region of the brain also is activated when humans try to understand other peoples' behavior in light of their mental and emotional state.

"Inactivity in the rostro-medial prefrontal cortex during rejection may explain why those with BPD are more sensitive and more distressed by rejection. Understanding why individuals with this debilitating and high risk disorder experience emotional distress to rejection goes awry will help us develop more targeted therapies for BPD," said Fertuck, associate professor in CCNY's Colin Powell School for Civic and Global Leadership, and the Graduate School, CUNY.

On the significance of the study, Fertuck noted that while previous findings in this area have been mixed, "what we've done is improve the specificity and resolution of our rejection assessment, which improves on prior studies."

Research continues with several investigations underway examining the

role of social rejection in different mental health problems including post-traumatic stress disorder, depression, and social anxiety.

Fertuck heads the Social Neuroscience and Psychopathology (SNAP) lab in the Colin Powell School. The lab advances a collaborative program of research at the interface of the clinical understanding of Borderline Personality Disorder and related psychopathology, psychotherapy research, experimental psychopathology, and social neuroscience.

More information: Eric A. Fertuck et al, Rejection Distress Suppresses Medial Prefrontal Cortex in Borderline Personality Disorder, *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (2023). DOI: 10.1016/j.bpsc.2022.11.006

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