FC12-01

NEURAL PROCESSING OF SOCIAL REJECTION: THE ROLE OF SCHIZOTYPAL PERSONALITY TRAIT

P. Premkumar[1,2], U. Ettinger[1,3], S. Inchley-Mort[1], A. Sumich[1,2], S.C. Williams[4], E.A. Kuipers[1,5], V. Kumari[1,5]

[1]Psychology, Institute of Psychiatry, London, [2]Division of Psychology, School of Social Sciences, Nottingham Trent University, Nottingham, UK, [3]Departments of Psychiatry and Psychology, Ludwig Maximilians University, Munich, Germany, [4]Centre for Neuroimaging Sciences, Institute of Psychiatry, [5]NIHR Biomedical Research Centre for Mental Health, South London and Maudsley NHS Foundation Trust, London, UK

A fear of being rejected can cause perceptions of more insecurity and stress in close relationships. Healthy individuals activate the dorsal anterior cingulate cortex (dACC) when experiencing social rejection, while those who are vulnerable to depression deactivate the dACC presumably in order to down-regulate salience of rejection cues and minimize distress. Schizotypal individuals, characterised by unusual perceptual experiences and/or odd beliefs, are more rejection sensitive than normal. We tested the hypothesis, for the first time, that individuals with high schizotypy also have an altered dACC response to rejection stimuli. Twenty-six healthy individuals, 14 with low schizotypy (LS) and 12 with high schizotypy (HS), viewed depictions of rejection and acceptance and neutral scenes while undergoing functional MRI. Activation maps in LS and HS groups during each image type were compared using SPM5 and their relation to participant mood and subjective ratings of the images was examined. During rejection relative to neutral scenes, LS activated and HS deactivated the bilateral dACC, right superior frontal gyrus and left ventral prefrontal cortex. Across both groups, a temporo-occipito-parieto-cerebellar network was active during rejection, and a left fronto-parietal network during acceptance, relative to neutral scenes, and the bilateral lingual gyrus during rejection relative to acceptance scenes. Our finding of dACC-dorso-ventral PFC activation in LS, but deactivation in HS individuals when perceiving social rejection scenes suggests that HS individuals attach less salience to and distance themselves from such stimuli. This may enable them to cope with their higher-than-normal sensitivity to rejection.

https://doi.org/10.1016/S0924-9338(11)73580-5 Published online by Cambridge University Press