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THE NEURAL RESPONSE TO RELATIVES´ CRITICISMS AND COMPLIMENTS IN INDIVIDUALS WITH A SCHIZOTYPAL PERSONALITY

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A high level of expressed emotion (EE) in the form of criticism and hostility by family members towards schizophrenia patients increases the risk of relapse to a psychotic episode. Studying the neural response to relatives' criticisms would help to understand how patients interpret and cope with EE in terms of the salience patients attach to criticisms and how this information is encoded and stored. Formerly depressed patients fail to activate the dorso-lateral prefrontal cortex (DLPFC) and anterior cingulate cortex (ACC) on hearing maternal criticisms. We tested the hypothesis, for the first time, that individuals with high schizotypy would have an altered DLPFC and ACC response to relatives' criticisms. Twenty-four healthy individuals, 12 with low schizotypy (LS) and 12 with high schizotypy (HS), listened to a close relative's criticisms, compliments and neutral comments about them while undergoing functional MRI. The relative's EE level was assessed using the Camberwell Family Interview. HS relatives were more likely to show high EE than LS relatives. Activation maps in LS and HS groups during each comment type were compared using SPM5. During criticisms relative to neutral comments, HS activated and LS deactivated the DLPFC and ACC. During compliments relative to neutral comments, LS activated and HS deactivated the insula, lingual gyrus, cerebellum, thalamus, postcentral gyrus and medial frontal gyrus. Our finding of DLPFC-ACC activation in HS, but deactivation in LS individuals when listening to relatives' criticisms suggests that HS individuals may have difficulty suppressing emotional interference during cognitive control.

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