Article: 2078
Topic: 40 - Bipolar Disorders

RELATIONSHIP BETWEEN OLFACTORY FUNCTION AND SOCIAL COGNITION IN EUTHYMIC BIPOLAR PATIENTS

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Background: Individuals with bipolar disorder show consistent deficits in olfactory ability and have also shown deficits in social cognition.
Aims/objectives: To explore the relationship between olfactory ability and social cognition, especially facial emotion perception, in bipolar disorder.
Methods: Thirty-nine euthymic outpatients meeting DSM-IV-TR criteria for bipolar disorder and a sample of 39 healthy volunteers matched on demographic criteria were recruited. Both groups were assessed at one time point with the University of Pennsylvania Smell Identification Test (UPSIT), the Emotion Recognition Test, the Faux Pas Recognition Test, as well as measures of general cognition (Asarnow's Span of Apprehension Test, Wisconsin Sort Card Test) and general functioning (GAF, FAST).
Results: Bipolar patients achieved significant lower scores on both capacity for olfactory discrimination ($p = 0.02$) and recognition of facial emotions ($p = 0.03$), compared to healthy controls. A significant correlation between the capacity for smell identification (UPSIT) and the recognition of facial expressions (FACE test) was found ($p = 0.001$). Analyses revealed significant relationships between olfactory identification and facial emotion recognition, theory of mind, general cognition, and functioning. Controlling for age and cigarettes smoked, relationships remained significant between olfactory function and facial emotion recognition. Regression models showed a trend level association between olfactory function and facial emotion recognition above and beyond the influence of age, cigarette smoking, and general cognition.
Conclusions: There is a deficit of olfactory identification in euthymic patients with bipolar disorder that is correlated with a deficit in non-verbal measure of social cognition.

https://doi.org/10.1016/S0924-9338(13)76983-9 Published online by Cambridge University Press