

### The Dynamic Relationship of Olfaction and Emotion in Bipolar Disorders

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Olfactory dysfunction has been correlated with alterations in the emotional processes in several neuropsychiatric disorders. However, there is little research on olfactory processing and emotional regulation in bipolar disorder. We aim to explore the potential relationship between these two relevant dimensions (olfaction and emotional response) in patients with bipolar disorders.

Methods: Olfactory perception and emotional reactivity were assessed by the Multidimensional Assessment of Thymic State (MATHYS) in a large sample of stable bipolar patients (N = 1,271).

*Preliminary Results:* We observed a significant negative correlation between olfactory perception and subsyndromal depressive symptoms ( $r=-0.8$ ;  $P < 0.01$ ) while a slight positive correlation between olfactory perception and manic symptoms was found ( $r=0.2$ ;  $P < 0.01$ ). Limitations: The degree of olfactory perception was assessed by self-report questionnaire.

Conclusion: Odor perception may be an illness state marker of mood syndromes in bipolar disorder. Alternatively, differences in odor perception may identify heterogeneous subgroups within the bipolar spectrum. Further studies are needed to understand the implications of odor perception as well as other signatures (e.g. deficit in odor acuity, deficits in the affective processing related to olfaction) in patients with bipolar disorder.