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EMOTION PROCESSING ACROSS PSYCHIATRIC DISORDERS - A DIMENSIONAL APPROACH

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Introduction: A dimensional approach in psychiatry strives to identify neurobiological signatures of core (dys)functions such as responses to emotional stimuli across nosological boundaries.
Aim: We compared responses to emotional stimuli between major psychiatric disorders and investigated whether there is a psychopathological correlate irrespective of diagnostic group.
Methods: We used functional magnetic resonance imaging (fMRI) to assess the functional correlates of responses to unexpected pleasant and aversive emotional pictures in n=175 subjects suffering from alcohol dependence (n=29), schizophrenia (n=37), major depressive disorder (MDD; n=25), bipolar disorder (acute manic episode; n=12), panic disorder (n=12) or attention deficit/hyperactivity disorder (ADHD; n=20) and in healthy controls (n=40). The level of anxiety was measured in all diagnostic groups with the State-Trait Anxiety Inventory, and severity of depressive mood was measured with Beck´s depressions inventory in all diagnostic groups with the exception of bipolar patients.
Results: Over all diagnostic groups, a significant activation of BA10 was observed during the presentation of unexpected pleasant pictures, whereas a significant activation of the left amygdala and left insula was found during the presentation of unexpected aversive pictures. We did not find significant effects of group, nor a correlation of neuronal activation with depressed mood or anxiety.
Conclusions: In spite of reported alterations in emotion processing in different psychiatric diseases, responses to emotional pictures did not differ across nosological boundaries in our study. However, a dimensional approach that targets e.g. personality traits or basic learning mechanisms and their neuropsychological correlates across traditional disease categories may be more promising.

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