

Publication

Altered Insular Function during Aberrant Salience Processing in Relation to the Severity of Psychotic Symptoms

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 3693085**Author(s)** Walter, Anna; Suenderhauf, Claudia; Smieskova, Renata; Lenz, Claudia; Harrisberger, Fabienne; Schmidt, André; Vogel, Tobias; Lang, Undine E.; Riecher-Rössler, Anita; Eckert, Anne; Borgwardt, Stefan**Author(s) at UniBasel** [Riecher-Rössler, Anita](#) ; [Lenz, Claudia](#) ; [Schmidt, André](#) ; [Vogel, Tobias](#) ; [Eckert, Anne](#) ; [Borgwardt, Stefan](#) ; [Lang, Undine](#) ; [Harrisberger, Fabienne](#) ;**Year** 2016**Title** Altered Insular Function during Aberrant Salience Processing in Relation to the Severity of Psychotic Symptoms**Journal** Frontiers in Psychiatry**Volume** 7**Pages / Article-Number** 189

There is strong evidence for abnormal salience processing in patients with psychotic experiences. In particular, there are indications that the degree of aberrant salience processing increases with the severity of positive symptoms. The aim of the present study was to elucidate this relationship by means of brain imaging. Functional magnetic resonance imaging was acquired to assess hemodynamic responses during the Salience Attribution Test, a paradigm for reaction time that measures aberrant salience to irrelevant stimulus features. We included 42 patients who were diagnosed as having a psychotic disorder and divided them into two groups according to the severity of their positive symptoms. Whole brain analysis was performed using Statistical Parametric Mapping. We found no significant behavioral differences with respect to task performance. Patients with more positive symptoms showed increased hemodynamic responses in the left insula corresponding to aberrant salience than in patients with less positive symptoms. In addition, left insula activation correlated negatively with cumulative antipsychotic medication. Aberrant salience processing in the insula may be increased in psychosis, depending on the severity of positive symptoms. This study indicates that clinically similar psychosis manifestations share the same functional characteristics. In addition, our results suggest that antipsychotic medication can modulate insular function.

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