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THE NEURAL BASIS OF DISORGANIZED SYMPTOMS IN SCHIZOPHRENIA

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Structural brain changes in schizophrenia patients have been reported in many studies. It is still unclear how these changes relate to psychopathological symptom clusters. The aim of the present study was to investigate whether scores of the subscales from a five factorial model of the PANSS correlate with changes of brain morphology.

High-resolution magnetic resonance imaging scans from 54 patients with schizophrenia were analyzed with voxel based morphometry, a voxel-wise whole brain morphometric technique. We correlated grey matter density with the subscales of a five factor component analysis of the PANSS score. Additionally we performed a two group comparison with 101 healthy control subjects.

Significant negative correlations of the disorganization score with grey matter density were found for clusters of voxels in the right inferior frontal, right insular cortex, left temporal pole and left superior temporal gyrus, as well as cingulate cortex and cerebellum. No morphological correlate was found for the other four subscales. P atients showed significant less grey matter density than control subjects in the left and right insula lobe and superior temporal gyrus, left inferior frontal gyrus, right middle frontal gyrus and left anterior cingulate cortex.

The disorganisation syndrome in schizophrenia is linked to particular morphological grey matter reductions in key areas of the disorder. The data support the hypothesis that different symptom clusters in schizophrenia might have different neural substrates.