

**P02-155 - ENHANCED NON-PLANNING IMPULSIVITY IN SCHIZOPHRENIA-ADDICTION
COMORBIDITY IS RELATED TO ANTERIOR CINGULATE AND FRONTOPOLAR GRAY MATTER
VOLUMES**

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Despite the high prevalence of comorbid substance abuse in schizophrenia, there is still little knowledge about the influence of comorbidity on neuro-cognitive function, impulsivity and its impact on the brain.

The present study sought to determine whether addicted and non-addicted schizophrenic patients are impaired differentially on relevant domains of executive functions and impulsivity, and whether specific volumetric correlates exist.

Using voxel-based morphometry on high-resolution MRI data, we set out to examine the anatomical correlates of impulsivity and several executive domains (cognitive flexibility, working memory, inhibition and planning).

We recruited a total of 51 participants for this study. The schizophrenia group comprised 24 patients (12 patients with paranoid schizophrenia and 12 with additional comorbid substance abuse). The comparison group comprised 27 age and education matched non-schizophrenic individuals (14 healthy controls and 13 patients with substance use disorders).

Gray matter volume deficits were present in all patient groups but were greatest not in the comorbid but in the substance abuse group. With regard to this, lateral OFC volume reductions seems to be more schizophrenia related, whereas reductions in the medial OFC seems to be addiction related. Further, non-planning impulsivity seemed to be increased in comorbid patients as compared to non-addicted schizophrenics and associated with anterior cingulate, and frontopolar brain volumes.

The present study indicates severe volume and executive deficits in schizophrenia which are, however, only partially exacerbated by comorbid addiction. However there are pronounced and clinically relevant differences regarding non-planning impulsivity between these groups, which were represented also by volume alterations.