

Background:

Impairments in executive functions are often described in individuals with schizophrenia. Deficits in executive performance predict patients' everyday life competence. One everyday life aspect is the eating behavior of schizophrenic patients. Disturbed weight regulation with increased appetite, obesity and its comorbidity are well known features in patients with schizophrenia under antipsychotic treatment. Still, the clinical management of weight gain is insufficient and for many parts educational programs on dieting and control of food intake are inefficient.

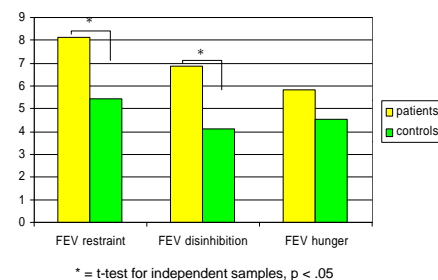
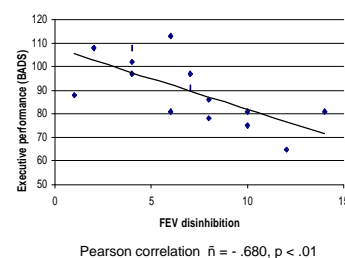
However, we assume that eating behavior is influenced by executive functioning and the management of increased appetite relies on executive performance. This is already supported by a study in healthy probands (Spinella & Lyke, 2004).

Results:

- Patients performed significantly worse in the BADS than did the controls ($p < .00$, t-test for independent samples).
- The reported restrained eating behavior was more frequent in patients than in controls ($p < .05$, t-test for independent samples).
- Patients showed more disinhibition in eating behavior than controls did ($p < .05$, t-test for independent samples).
- There were no significant differences in the perceived hunger between patients and controls.
- There was a significant negative correlation between executive performance and dietary restraint (Pearson correlation $\bar{r} = -.298$, $p < .05$).
- We also analyzed the correlation between executive functioning and disinhibition in those patients scoring high on dietary restraint and found a significantly negative interrelationship (Pearson correlation $\bar{r} = -.680$, $p < .01$).
- There was no significant correlation between executive functioning and disinhibition in those controls scoring high on dietary restraint.
- There were no significant differences in executive performance and eating behavior between patients receiving Risperidone or Olanzapine and patients receiving Quetiapine, Amisulprid, Flupentixol or Aripiprazol.

Materials and method:

This study included 29 patients who met DSM-IV or ICD-10 criteria for schizophrenia. Patients were receiving a stable antipsychotic medication. 23 healthy subjects matched for age, sex, educational level and financial income were introduced as controls. **Executive functioning** was measured by the BADS (Behavioural assessment of the dysexecutive syndrome) (Wilson, Alderman, Burgess, Emslie, & Evans, 1996). The higher the score the better is the executive functioning. **Eating behaviour** standards were assessed by the FEV (Pudel & Westenhöfer, 1989; Stunkard & Messick, 1989) with the subscales "dietary restraint", "disinhibition" and "perceived hunger".

Eating behavior (FEV) in patients and controls**Correlation „disinhibition“ (FEV) and executive performance (BADS)****Discussion:**

We showed that impairments in executive functioning go together with higher disinhibition in eating situations. This leads to an increased caloric intake, especially against the background of an increased appetite because of neuroleptic treatment. Weight gain and high BMI are the results which again motivate dietary restraint. Therefore, we assume that reported dietary restraint is to some extent a cognitive compensation of impulsive eating behavior.

We conclude that executive functioning plays an important role for the regulation of eating behavior and for the management of an increased appetite under neuroleptic treatment in patients with schizophrenia.

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