When asking does matter: A comparison of subjective and objective measures in the Cognitive Basic Assessment (COGBAT) test battery in healthy subjects and patients with schizophrenia

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Introduction

Background
Empirical findings on the relationship between subjective and objective measures of cognitive performance suggest a weak association in healthy people (e.g., Broadbent, Cooper, FoxGerald & Parks, 1982; Hermann) and schizophrenia patients (e.g., Chan et al., 2008, Schettler & Delis, 2011). In a meta-analysis 14 out of 26 studies did not report any correlations between subjective and objective measures in schizophrenic patients (Jettehn, Nelleouz-Morozov, Luck, & Sty, 2012).

Still, patients suffering from schizophrenia show impairments in the most important cognitive functions such as attention, memory and executive functions. (Abdoulou-Gayy et al. 2006).

A new neuropsychological test battery has been developed that covers the above mentioned dimensions: Cognitive Basic Assessment (COGBAT) including also a questionnaire to assess the same dimensions subjectively (FLEI).

Research question
Are there significant correlations between subjective and objective measures of executive functions, attention and memory in patients suffering from schizophrenia and healthy adults observable assessed by COGBAT and FLEI?

Method

Measurement Instruments
- Cognitive Basic Assessment (COGBAT)
- FLEI

Samples
- A: 2 Parallelized subsamples
  - N=46 healthy controls
  - N=46 schizophrenic patients
  - matched in age, gender and educational level
  - Age: M=32.17; SD=1.64

- B: Representative sample
  - N=283 respondents
  - sub-sample drawn from norm sample, underwent examination with the COGBAT and performed all test and the FLEI
  - Age: M=41.79; SD=15.78

Results

Small and mostly insignificant correlations between subjective and objective measures were observed.

3 hierarchical logistic regression analyses were separately conducted for attention, memory and executive functions adding objective measures in a first step and subjective measures in a second step. The results reveal that the administration of subjective measures provide incremental validity over the neuropsychological tests.

Discussion

Conclusion
In accordance with previous findings, no significant correlations between subjective and objective measures could be observed (e.g., Chan et al., 2008, Hermann et al., 2011, Schettler & Delis, 2011). In addition, it could also be shown that patients suffering from schizophrenia show lower average lower scores on different cognitive dimensions (Paredes, Bogat, Catelani, Berrando, Gayt & Salamero, 2003) compared to healthy people (Gold, 2006; see Figure 2). The results of the logistic regression analyses suggest administering both subjective and objective measures, because it leads to higher sensitivity and specificity of test results.

In regard subjective measures provide additional diagnostic information over objective neuropsychological tests.

These findings emphasize the importance of providing subjective measurement instruments additionally to objective tests. Furthermore, it is suggested to raise awareness of patients about differences in subjective perception about cognitive abilities and actual objective test results.

References: