

Assessing executive functioning in schizophrenia with the Cogtest

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Background: Cogtest (Cogtest plc, London) is a computerized neurocognitive test battery of 16 subtests currently being used in over 300 organizations across 16 countries. It is designed for use with a variety of clinical populations and in clinical trials. The platform allows for accurate recording of reaction time data, enhanced standardization relative to examiner administered tests and is easily adapted for implementation in functional neuroimaging environments. Its internet data capture and web reporting facilities make it unique amongst current cognitive test providers. Additionally, its multiple parallel forms make it amenable to repeated testing sessions across time.

Methods: One subtest, The Strategic Target Detection Test (STDT), probes executive functioning in a manner similar to the paper-and-pencil 'cancellation' tests or the 'cross-out' subtest of the WAIS-III. The subject is not told in advance which of the stimuli is the 'target' and must therefore learn which is the correct target by observing feedback and modifying future responses. The target stimulus also changes after a criterion number of consecutive correct responses, similar to the WCST. We administered the STDT to acutely ill inpatients with schizophrenia (Scz) and adults with attention deficit hyperactivity disorder (ADHD), in addition to a healthy comparison group.

Results: Preliminary data reveals that Scz patients have longer reaction times for correct responses [$F(2,14) = 12.98; p = .001$] relative to both the comparison and the ADHD group.

Conclusions: These results suggest that the Cogtest is useful in characterizing the executive dysfunction of schizophrenia patients.