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Test-Retest Agreement, Random Measurement Error and Practice Effect of the Continuous Performance Test-Identical Pairs for Patients with Schizophrenia

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Abstract : Background and Purposes: Deficits in sustained attention are common in patients with schizophrenia. Such impairment can limit patients to effectively execute daily activities and affect the efficacy of rehabilitation. The aims of this study were to examine the test-retest agreement, random measurement error, and practice effect of the Continuous Performance Test-Identical Pairs (CPT-IP) (a commonly used sustained attention test) in patients with schizophrenia. The results can provide empirical evidence for clinicians and researchers to apply a sustained attention test with sound psychometric properties in schizophrenia patients. Methods: We recruited patients with chronic schizophrenia to be assessed twice with 1 week interval using CPT-IP. The intra-class correlation coefficient (ICC) was used to examine the test-retest agreement. The percentage of minimal detectable change (MDC%) was used to examine the random measurement error. Moreover, the standardized response mean (SRM) was used to examine the practice effect. Results: A total of 56 patients participated in this study. Our results showed that the ICC was 0.82, MDC% was 47.4%, and SRMs were 0.36 for the CPT-IP. Conclusion: Our results indicate that CPT-IP has acceptable test-retests agreement, substantial random measurement error, and small practice effect in patients with schizophrenia. Therefore, to avoid overestimating patients' changes in sustained attention, we suggest that clinicians interpret the change scores of CPT-IP conservatively in their routine repeated assessments.

Keywords : schizophrenia, sustained attention, CPT-IP, reliability
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