

Outcome Measure	Stroop Test
Sensitivity to Change	Yes
Population	Adult
Domain	Neuropsychological Impairment
Type of Measure	Objective Test
ICF-Code/s	b1
Description	<p>The Stroop Test is a measure of selective attention and response inhibition. There are a number of versions including a version developed by Golden (1978), Trenerry et al. (1989), the Victoria version and a version that is available in the D-KEFS (Color-Word Interference Test).</p> <p>The versions differ somewhat in their administration, however, the general principle underlying the task is that in one condition, the individual reads aloud a list of colour names in which no name is printed in its matching colour. In another condition, the individual names the colour ink in which the colour names are printed. The measure is based on the observation that time to complete the task increases significantly when the individual is asked to name the colour of the ink rather than read the word (interference score).</p> <p>Different versions include control conditions such as reading colour names printed in black ink or naming colour stimuli such as dots.</p> <p>The Stroop Test takes approximately 5 minutes to administer.</p>
Properties	<p><u>Test-Retest Reliability:</u> Reliabilities of .73-.86 were reported for the Golden (1975) version of the test, however the interval was not reported. Franzen et al. (1987) reported reliabilities of .67-.83 for the Golden version in 62 healthy individuals tested 1-2 weeks apart.</p> <p><u>Construct validity:</u> The interference score tends to correlate reasonably well with a continuous performance task ($R^2 = .31$), a measure of attention (Weinstein et al., 1999). Moderate correlations have been shown with measures of prepotent response inhibition such as stopping probability ($r = .33$) and time (.56) of the stop signal task and the difference score between Trails A and B (.55; May & Hasher, 1998). Other factors such as working memory, processing speed and conceptual ability are also reported to contribute to Stroop performance (see Strauss, Sherman & Spreen, 2006 for an overview).</p> <p><u>Concurrent Validity:</u> The interference score has been found to significantly differ between healthy individuals and patient groups thought to have executive disturbance, including schizophrenia, Parkinson's disease and Huntington's disease (Hanes et al., 1996). Patients with TBI typically have slower response times for all task conditions, but do not consistently</p>

	<p>demonstrate disproportionate impairment in the interference condition (see e.g. Bachelor et al., 1995; Felmingham et al., 2004; McLean et al., 1983; Ponsford & Kinsella, 1992; Rios et al., 2004; Rojas & Bennett, 1995). A meta-analysis of Stroop interference score in adults with TBI found that, across 19 studies there was a small and non-significant effect for Stroop interference ($d = 0.05$) even when separate effect sizes were estimated for total time, total number and RT/trial (to account for use of different versions of the task; Dimoska-Di Marco, et al., 2011).</p>
Advantages	<ul style="list-style-type: none"> • Quick to administer and easy to score. • Very widely used. • Reasonably priced.
Disadvantages	<ul style="list-style-type: none"> • Although interference scores correlate with measures of attention and response inhibition, there are a number of other cognitive abilities underlying performance as well. • Differing versions of the test may not be tapping the same underlying processes. • Interference score does not consistently distinguish TBI from controls.
Additional Information	
Reviewers	Skye McDonald

References

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