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The relation between executive functions and school performance in healthy adolescents

Annemarie Boschloo, Lydia Krabbendam, Renate de Groot, & Jelle Jolles

How well do executive function tests and questionnaires predict school performance in healthy adolescents? This was investigated in 173 healthy adolescents aged 12-18 years who study at pre-university education level (in Dutch: *vwo*). Executive functions were measured with the D-KEFS subtests Sorting Test and Tower Test, and with the BRIEF-SR. School performance was measured with end of term grades for Dutch, English and mathematics.

Results from regression analysis showed that executive function tests together predicted approximately 4% of variance in school grades after correction for grade and sex. Detailed analysis showed that the Tower Test predicted mathematics grades. The BRIEF-SR predicted Dutch grades for all adolescents, and English grades only for girls. The Sorting Test did not predict any grades.

This study shows that a) executive function tests predict only a small part of variance in school grades in healthy adolescents, and that b) not all executive function tests predict school grades equally well. This is important information for clinical neuropsychologists and school psychologists: in healthy adolescents, differences in school performance are mostly related to other factors than to differences in executive functions.