

## Attention problems, inhibitory control, and intelligence index overlapping genetic factors: A study in 9, 12 and 18-year-old twins

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### Introduction

It is assumed that attention problems (AP) are related to impaired executive functioning, especially to inhibitory control. We investigated the association between AP and inhibitory control in children, adolescents and young adults, and tested to what extent the association was due to genetic factors shared with IQ.

### Methods

Data were available from three independent samples of 9, 12 and 18-year-old twins and their siblings (1209 subjects). AP were assessed with checklists completed by parents, teachers and children themselves. Inhibitory control was measured with the Stroop Colour Word Task, and IQ with the WISC or WAIS.



### Results

AP and inhibitory control were only correlated in the 12-year-old cohort ( $r = .18$ ), and this correlation was not significant after controlling for IQ. Significant correlations existed between AP and IQ in 9- and 12-year olds ( $r = -.26$  /  $-.34$ ), but were non-significant in the 18-year-olds. Inhibitory control and IQ were correlated in all cohorts ( $r = -.16$ ,  $-.24$  and  $-.35$  resp.). Genetic factors that influenced IQ also influenced inhibitory control.

### Conclusion

We conclude that the association between AP and inhibitory control as reported in the literature may largely derive from genetic factors that are shared with IQ.

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