Data supplement to Rommelse et al. High intelligence and the risk of ADHD and other psychopathology.
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**Table DS1    Mean scale scores (0-2) of ADHD, externalizing and internalizing problems in relation to estimated intelligence**

| | Full sample* N=2230 | IQ 55-69 N=65 | IQ 70-84 N=318 | IQ 85-99 N=805 | IQ 100-114 N=721 | IQ 115-129 N=268 | IQ 130+ N=39 | Curve estimation** *F-value, % variance explained (R²)* |
|---|---|---|---|---|---|---|---|---|
| **CBCL** M (SD) | | | | | | | | |
| Attention problems | .52 (.41) | .75 (.45) | .63 (.39) | .55 (.41) | .48 (.40) | .44 (.40) | .25 (.26) | Linear: $F$=88.0, $R^2$=.041 |
| Hyperactivity/impulsivity | .49 (.48) | .72 (.61) | .64 (.51) | .53 (.50) | .42 (.45) | .39 (.42) | .30 (.35) | Linear: $F$=80.2, $R^2$=.038 |
| Externalizing | .24 (.20) | .33 (.28) | .30 (.23) | .25 (.21) | .21 (.18) | .22 (.17) | .14 (.10) | Inverse: $F$=65.5, $R^2$=.031 |
| Internalizing | .25 (.19) | .30 (.30) | .25 (.18) | .24 (.19) | .23 (.18) | .28 (.21) | .21 (.13) | n.s. |
| **TRF** M (SD) | | | | | | | | |
| Attention problems | .53 (.58) | .95 (.64) | .75 (.62) | .58 (.58) | .43 (.54) | .30 (.47) | .21 (.33) | Linear: $F$=178.0, $R^2$=.085 |
| Hyperactivity/impulsivity | .36 (.53) | .49 (.58) | .48 (.62) | .40 (.55) | .29 (.48) | .22 (.44) | .11 (.24) | Linear: $F$=58.3, $R^2$=.029 |
| Externalizing | .22 (.38) | .41 (.52) | .33 (.49) | .23 (.38) | .18 (.33) | .14 (.31) | .17 (.35) | Linear: $F$=48.0, $R^2$=.024 |
| Internalizing | .33 (.37) | .44 (.35) | .38 (.38) | .34 (.37) | .29 (.35) | .29 (.38) | .25 (.30) | Inverse: $F$=39.7, $R^2$=.020 |
| **YSR** M (SD) | | | | | | | | |
| Attention problems | .56 (.40) | .55 (.44) | .54 (.41) | .56 (.39) | .58 (.39) | .56 (.40) | .57 (.38) | n.s. |
| Hyperactivity/impulsivity | .58 (.40) | .51 (.47) | .54 (.44) | .58 (.40) | .59 (.39) | .59 (.34) | .59 (.36) | n.s. |
| Externalizing | .27 (.20) | .27 (.22) | .27 (.20) | .27 (.20) | .27 (.19) | .28 (.19) | .25 (.15) | n.s. |
| Internalizing | .36 (.24) | .40 (.28) | .35 (.24) | .36 (.24) | .37 (.24) | .37 (.24) | .37 (.25) | n.s. |

* Full sample also includes N=5 children with an IQ 45-51 that formed a too small group for illustrating group means and SDs for psychopathology measures.

** Analyses performed with estimated IQ (vocabulary and block patterns) as continuously distributed predictor. IQ groups were formed for illustrative purposes.

| | Full sample** N=2230 | IQ 55-69 N=65 | IQ 70-84 N=318 | IQ 85-99 N=805 | IQ 100-114 N=721 | IQ 115-129 N=268 | IQ 130+ N=39 | |
|---|---|---|---|---|---|---|---|---|
| **Teacher-parent difference score*** *M (SD)* | | | | | | | | **Curve estimation*** *F-value, % variance explained ($R^2$)* |
| Attention problems | -.01 (.53) | .23 (.64) | .11 (.56) | .01 (.53) | -.05 (.52) | -.15 (.48) | -.06 (.33) | Linear: $F$=40.8, $R^2$=.022 |
| Hyperactivity/impulsivity | -.16 (.58) | -.24 (.73) | -.18 (.62) | -.14 (.60) | -.14 (.56) | -.18 (.50) | -.20 (.34) | n.s. |
| Externalizing*** | -.04 (.36) | .03 (.48) | .01 (.43) | -.03 (.35) | -.04 (.33) | -.09 (.30) | .06 (.34) | n.s |
| Internalizing | .07 (.37) | .10 (.41) | .13 (.38) | .09 (.37) | .05 (.35) | .00 (.38) | .06 (.29) | Inverse : $F$=20.1, $R^2$=.011 |
| **Teacher-parent correlation** | | | | | | | | **IQXparent rating regressed onto teacher rating (in addition to main effect of parent rating)** *B, t, p* |
| Attention problems | .46 | .35 | .44 | .46 | .42 | .40 | .38 | -.73, -8.64, <.001 |
| Hyperactivity/impulsivity | .35 | .25 | .39 | .34 | .31 | .29 | .39 | -.38, -3.80, <.001 |
| Externalizing | .34 | .37 | .39 | .33 | .29 | .30 | .32 | -.39, -4.34, <.001 |
| Internalizing | .26 | .25 | .19 | .28 | .26 | .28 | .30 | -.30, -3.46, .001 |

**Table DS2** Rater discrepancy scale scores and interrater correlations of ADHD, externalizing and internalizing problems in relation to estimated intelligence

* Negative score = parent rated higher symptom levels; positive score = teacher rates higher symptom levels.
** Analyses performed with estimated IQ (vocabulary and block patterns) as continuously distributed predictor. IQ groups were formed for illustrative purposes.
*** Results for externalizing problems were moderated by gender: rater discrepancy scores were not related to IQ in girls, but were in boys (Linear: $F$ = 7.62, $p$ = .006) with larger rater discrepancy in the lower IQ spectrum (teacher rating more externalizing problems than parents) than in the average to higher IQ spectrum.

**Table DS3   Potential differential effects of ADHD (and other) problems on functional impairment at school depending on IQ**

| | Parent report | Teacher report | Self report |
|---|---|---|---|
| **Repeated grade(s) / special education for learning disabled** | Attention problems: $\chi^2 = 25.6$, $p < .001$ Hyperactivity/impulsivity: Attention problems: $\chi^2 = 10.8$, $p = .001$ | Attention problems*: $\chi^2 = 11.7$, $p = .001$ | - |
| **Parents received phone call(s) because of problems at school** | Attention problems: $\chi^2 = 26.6$, $p < .001$ Externalizing problems: $\chi^2 = 24.9$, $p < .001$ Internalizing problems: $\chi^2 = 11.1$, $p = .001$ | IQ x attention problems: $\chi^2 = 7.5$, $p = .006$ Externalizing problems: $\chi^2 = 83.7$, $p < .001$ | Externalizing problems**: $\chi^2 = 46.1$, $p < .001$ |
| **Performs below own capacity according to teacher** | Attention problems: $\chi^2 = 31.2$, $p < .001$ | IQ x attention problems*: $\chi^2 = 8.4$, $p = .003$ Externalizing problems: $\chi^2 = 8.9$, $p = .003$ | Attention problems: $\chi^2 = 15.3$, $p < .001$ Externalizing problems**: $\chi^2 = 16.1$, $p < .001$ Internalizing problems: $\chi^2 = 7.9$, $p = .005$ |

\* Effect was present for both boys and girls, but stronger in girls than boys.

\*\* Effect was only present for boys.